THE TIMES
Higher Education
SUPPLEMENT

Public service lures sociologists

by Simon Midgley

Most of the sociologists and psychologists who left university with a first degree during the years 1972-76 to enter permanent employment went into public service.

This is one of the findings of a survey by the Department of Employment's unit for manpower studies into the first career steps of British social science students.

The examination of the first destinations of economics, geography, psychology and sociology graduates reveals predictably that most of the economists took jobs in industry or commerce—although, surprisingly perhaps, rather more of them went into commerce than industry.

Geographers were split fairly evenly between public service employers and those in industry and commerce, while the smallest proportion from each discipline went into employment connected with education.

Of the 44 to 81 per cent of economists who went into the broad commerce group the majority went into accountancy (the proportion increasing from 21 to 31 per cent of the total over the five years) and about half the rest went into banking and insurance.

More unexpected perhaps is the fact that over these years a larger proportion of economists entered buying, marketing and selling occupations (between 7 and 111 per cent) than went into advisory work (between 3] and 61 per cent).

Of the four disciplines considered by the unit geography supplied the highest proportion of first degree graduates each year to the civil service (between 8 and 16 per cent), although the number of psychologists entering the civil service rose from 15 (6 per cent) in 1972 to 33 (11 per cent) in 1976.

Well over 50 per cent of sociologists and over a third of psychologists went to work for local authorities/hospital services. Of these sociologists went mainly into social work and psychologists into social work or clinical psychology.

Management, administration and general traineeships were of lesser importance but nevertheless together attracted 9 to 14 per cent of sociologists and 9 to 10 per cent of psychologists. Many psychologists also went into buying, marketing and selling and, particularly during the latter part of the period, into personnel work.

Some 17 to 28 per cent of first degree geography graduates who entered employment took up management, administration or general traineeships and 13] per cent rising to 231 per cent in 1976 went in for financial work.

Environmental planning occupations were popular with geographers until 1976 when numbers dropped sharply. This, the auctors suggest, may be due to the effect of economies made by local authorities in their recruitment programmes for staff in town and country planning departments as a result of the general economic situation.

"Social science students. An examination of the first steps in their careers", is published in the *Department of Employment Gazette*, January, 1978.

ILEA will redistribute £100,000 grant cuts

by Sue Reid

The £100,000 due to be cut from the block grants of Central London and Thames polytechnics by the Inner London Education Authority for failing to keep their foreign numbers static in the current year will be redistributed among other London polytechnics and colleges.

Mr Ellis Hillman, chairman of the authority's further and higher education sub-committee, which made the controversial sanctions proposal at its meeting last week, has maintained that the cash will be "redeployed" elsewhere.

This move was agreed, he claimed, at the sub-committee meeting but Mr John Bevan, the authority's education officer, this week refused to confirm it. He said the overseas students issue and the sanctions proposal were due to be considered by the ILEA education committee next week.

If the proposed cutbacks gain approval at the next sub-committee meeting the college directors will be told that the £100,000 grant reduction cannot be "reinstated" from maintenance grant resources or from any other sources. Both colleges have cash reserves.

Meanwhile Bath Central London and Thames are planning to appeal to the authority about the proposed cut in their block grants, particularly as a surprise announcement during the sub-committee's meeting.

A Thames polytechnic spokeswoman said an emergency session of the college's court of governors was likely to be called and an appeal meeting with the ILEA sought. She pointed out that although the college had increased its overseas numbers by 71 over last year, the proportion of the total still remained stood at 16.8 per cent, 4 per cent lower than the ILEA average.

Central London is also planning to write to the ILEA stressing that the plan for a freeze on numbers was only agreed with the college finally last March "far too late to effect any control on numbers".

Mr Bevan this week refused to concede that the sub-committee members had acted against the wishes of the ILEA officers despite the fact that in a briefing paper circulated at the meeting a maximum cutback of just over £9,000 for the two polytechnics' library grants was mooted. There is, however, some doubt that the size of the final cut sanction agreed came as a complete surprise to Mr Bevan and his officers.

Leader, page

NUS concerned by Iranian surveillance

The National Union of Students has called on the Government to prevent universities and colleges from disclosing private information about their students, following renewed allegations that the Iranian Embassy in London has been involved in the political surveillance of Iranian students.

At a press conference this week the NUS produced copies of replies sent by several polytechnics to the Iranian Embassy in 1975, after receiving a request from the embassy for the names and addresses of all the Iranian students on their courses. Others, including North Staffordshire and Kingston, refused to disclose the information without the students' permission.

Mr Trevor Phillips, national secretary of the NUS, claimed that several Iranian students had been harassed and imprisoned after their return home.

He added: "We are very alarmed at the apparent ease with which college authorities are releasing details about their students to foreign embassies. In the past the NUS has written to colleges warning them not to give out such information because of the danger it can cause. We are not prepared to tolerate this infringement of students' liberties any longer."

At the press conference a representative of the Campaign against Repression in Iran, who asked for his name to be withheld, produced copies of a document found ducing a student occupation of the Iranian embassy in Geneva last year. The document revealed that Mr Habib Dashti, the student counsellor at Iran's London embassy, participated in a Geneva meeting attended by agents of SAVAK, the Iranian secret service.

Invitation: Joyce Biconio's striking photograph features on the invitation to the fifth birthday of The Photographic Gallery, The University, Southampton, twice this month.

Discretionary awards drop

Local authorities made about 2,000 fewer full-value discretionary awards this year than 1975-76, according to a survey carried out by the Department of Education and Science. However, the overall number of awards held by students is about the same for the two years.

The survey, carried out by a questionnaire to authorities, shows that 5,000 more awards might have been expected this year to keep pace with the increase in the population aged 18 and 19-year-olds, a difference of 10 per cent.

CCETSW to consider staffing levels at Middlesex

The Central Council for Education and Training in Social Work is to consider the problem of staffing levels on Middlesex Polytechnic's three social work courses again next week.

Its professional studies and qualifications committee, which has delegated powers to validate social work courses including those at the polytechnic, is to discuss the matter during a meeting on Wednesday.

In December Mr Reg Wright, assistant director of the CCETSW, wrote to the polytechnic expressing "serious concern" about the courses which in two years have lost more than five lecturers who have not been replaced.

A work to rule by social work staff was narrowly averted earlier this term after last minute negotiations with Mr Alf Holt, Social Science Dean.

Staff were threatening to cut back on personal tutorials, the marking of course work and examination administration, in order to reduce their number of student contact hours.

Figures in 1977 show that social work staff teaching hours averaged 19 hours a week—although the staff claim that their actual hours worked averaged out at more than 28 hours a week.

Mr Holt has decided to limit the number of staff contact hours to 18 per week—subject to the outcome of negotiations currently proceeding on conditions of service agreement. This will mean fewer tutorials for students on placement.

Staff and students are concerned by the college's failure to maintain social work staffing at May 1977 levels. Dr Raymond Rickart, the college's director, has argued that financial constraints prevent him from remedying the situation.

The CCETSW has pointed out that staffing ratios on the polytechnic's courses far exceed the 1:10 norm laid down nationally by the council. On the two-year non-graduate course it is 1:15; on the two-year graduate course 1:13; and on the four-year degree course 1:11.

Mr Holt says that he is "beginning to see light at the end of the tunnel as far as social work staffing is concerned". Recently it has been decided to make a further appointment in social work at the senior lecturer or principal lecturer level and a temporary appointment to cover for a member of staff on maternity leave. He is also hoping to be able to make another permanent full-time appointment as well, which, he feels, should bring the polytechnic reasonably into line with national practice.

Tory students launch campaign to ditch general meetings

by Peter David

The Federation of Conservative Students is to launch a national campaign to reform the constitutions of student unions and put an end to general meetings as the main union decision-making body.

Announcing the campaign this week Mr David Wilks, chairman of the 20,000 member federation, said Conservative students would seek to replace general meetings with student representative councils, elected by secret ballot.

He said: "General meetings in many colleges are easy to manipulate by small groups who effectively challenge the order paper and interrupt serious discussion with constitutional wrangles and procedural motions. Thus meetings can last many hours and decisions are made only when the small clique who have sat it out are left at the end."

The FCS intends to use its 200 associations in universities and colleges to introduce constitutional changes setting up representative assemblies as the sovereign policy-making bodies in student unions. Members of the assemblies would be elected by proportional representation in a cross-campus ballot "so that the largest number of students possible can participate in the electoral process".

To support its case for reform the FCS this week published an analysis of the way student elections were chosen for the National Union of Students conference in Blackpool. It shows that only 31 institutions elected their NUS delegation by holding a secret campus ballot. In 151 colleges or universities the delegation was elected at general meetings, and 80 institutions the student executive appointed delegates.

According to Mr Wilks, the figures indicated that the majority of delegates who attended the NUS conference were elected by a tiny proportion of students in each college.

At Manchester Polytechnic, he claimed, the NUS delegation was elected by a union meeting of only 70 students. The polytechnic, which has over 5,000 full-time students has no quorum arrangement for general meetings. And at the College of All Saints in London, the NUS delegates had been personally appointed by the union president.

According to the FCS fewer than half the colleges entitled to send delegates to the conference did so and those colleges only 15 per cent of students participated in the election of their delegation.

Select committee visits Leeds

Members of the Commons Select Committee on Science and Technology visited Leeds University yesterday to see how the university has geared itself to meet national needs.

The university issued the invitation for the visit after the publication of the committee's third report in November, 1976. The report suggested changes in scientific and technical higher education to bring it more into line with social and economic needs.

It wanted the training of engineers and applied scientists for employment in industry to be given much higher priority and said that universities and engineering institutions should collaborate more. It wanted industry to be more involved in education at all levels.

Yesterday, Leeds showed the MPs who were headed by the select committee chairman, Mr Arthur Palmer, some of the work it is doing which contributes to industry. A group of industrialists was also invited for the day.

AUT pay deadlock

Representatives of the Association of University Teachers, the employers' side and Government officials failed to agree this week on the university teachers' pay settlement.

Committee, which is chaired by Mr Edward Simpson, deputy secretary at the Department of Education and Science and which includes members of the AUT and the University Authorities Panel, met on Monday morning.

NEXT WEEK

Donys Hay on Sir Thomas More.
Lancashire's Open College.
Simon Midgely on the training of Britain's engineers.
Professor Richard Gregory reviews "The Self and the Brain."
Peter Scott interviews Tom Weaver.

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Alternative technology centre set up

by Robin McKie
Science Correspondent

A centre for the study of alternative technology, based at North East London Polytechnic, was launched this week.

The new project has been set up through a first-year £7,000 grant from the Joseph Rowntree Charitable Trust and is also being backed by the Lucas Aerospace Combine shop stewards' committee as part of their bid to halt workforce cuts at their factories.

It is planned that students at the centre would help in the design of engineering projects developed by the committee's alternative corporate plan. This scheme is promoting products which could be made by Lucas Aerospace, rather than cutting down their workforce because of lack of orders.

The £7,000 for the Centre for Alternative Industrial and Technological Systems will be used to pay the salary of its coordinator, Mike George, and provide money for secretarial work and travel. However, other workers are being sought and it is also hoped that research councils and Government departments will finance individual projects.

The centre will start operating from the beginning of the next academic year and about 12 final-year students will be involved with projects that will account for about 15 per cent of their assessments.

Mr George said the centre is a focus of the active interest in Lucas and the political situation there. "There has been plenty of collaboration between polytechnics and management before but nothing like this."

It is also hoped that some of the centre's work will be used to encourage small-scale co-operatives in the locality and the dean of engineering at NELP, Jim Prentice, said the centre was part of the polytechnic's growing links with the East End community.

It is part of a widening industrial collaboration over vocationally orientated courses and provided further basis for industrial projects which were real and socially useful, he added.

Some of the projects already set up by the Lucas corporate plan, which will serve as the basis for the students work, include a hybrid electric-internal combustion power pack. This unit consists of a small engine which runs at constant speed and maximum revs. This is used to drive a generator which charges the batteries that run the pack's electric engine. The secretary of the Lucas combine committee, Ernie Scarbrow, claims this complex design results in an engine which uses 80 per cent less fuel and revs at "library level" noise.

Other projects include the development of a road-rail bus with pneumatic tyres capable of running on track and a heat pump powered by natural gas instead of electricity.

The centre aims to use its intellectual and material resources to help solve problems of social value.

The Oxford sweepstakes

St Catherine's College, Oxford, is to take part in a weekly lottery scheme run by Ladbroke's for a number of national charities, local authorities and sporting organizations. The object is to raise £200,000 for ventures which would be difficult to fund by other means. These include commissioning a set of tapestries for the college hall, new sports facilities, and the creation of a research fund.

The college will join in the lottery with such bodies as the National Society for the Mentally Handicapped, Make Children Happy and the Royal National Institute for the Blind.

The Master of St Catherine's College, Lord Bullock, announcing the scheme, said: "If lotteries are to be held at all, I think Parliament was right in allowing them to be used to raise money for charities, educational, cultural and recreational purposes. I have been confirmed in this view by my recent experience as chairman of the trustees of the Tate Gallery where a lottery helped to raise the funds with which to keep two Stubbs masterpieces in the country.

"The trustees subsequently decided to take part in the scheme run by Ladbroke's in order to acquire other works of art for the nation and the same arguments which convinced them have convinced my colleagues at St Catherine's."

Polys unhappy as Oakes committee winds up report

by Peter David

The Oakes committee on the management of colleges and polytechnics is to make another attempt to agree its final report next week amid a flurry of last-minute arguments about its wording and growing confusion about the status of the national body it proposes to create.

One of the major sticking-points at earlier meetings of the committee—the composition of the national body—has been resolved through a compromise formula giving local authorities up to 10 members on the 25 to 30 member body in place of their original seven.

Officially the local authority group will consist of eight members from English local authorities and one from Wales. But there is also an informal understanding that the ministerial appointees nominated to the body to represent "other interests" will include a local government treasurer.

Next week's meeting is nevertheless likely to be characterized by fierce argument about the wording of the report, as the warring factions jockey for position in the public debate that will follow its publication.

The polytechnic side, in particular, is thought to be refusing to sign unless it is made clear in the report that the committee's terms of reference made it impossible for members to propose a substantial diminution of local authority control over polytechnics.

There is also continuing disagreement about whether the national body should have executive or advisory status, and what its precise relationship should be to the Department of Education and Science and the local authority associations.

The local authority associations, for their part, have given their representatives on the committee permission to sign the report, but have reserved the right to challenge its recommendations when they are published.

Meanwhile Dr Keith Hampson, MP for Ripon and a junior Conservative spokesman on education, last night repeated his earlier warning that a Conservative government might refuse to implement the report.

He told a meeting of the Conservative parliamentary education committee that it would have been better to create a university-style grants committee than set up a national body "which is merely a collection of those same vested interests who have stumbled for a year on the Oakes committee".

"Absurdly restrictive" terms of reference, he said, had prevented the committee from asking whether the total withdrawal of local authorities from the control of polytechnics would have been a better solution.

"In the present pattern the local authority role has essentially been negative and restrictive, whether in relation to course development, control of non-teaching staff, or the raising of funds. After Oakes this will still be the case."

He added: "In order to retain some vestige of control, the local authorities have insisted that all course proposals should be vetted by their committees before being submitted to the national body.

"What an absurd perpetuation of the present cumbersome procedures, which have resulted in the polytechnics, supposedly created under public control in order for them to be quickly responsive to changing demands, taking over twice as long as a university in getting a new course off the ground."

PNL sociology degree kept on trial

by Simon Midgley

The academic ethos in the Polytechnic of North London's department of sociology is severely limiting the opportunities for free and open discussion of course content and organization according to some members of staff.

This is outlined in a letter—from the Council for National Academic Awards to the polytechnic—announcing that "current problems" mean that extended approval of the BSc (Hons) sociology course can only be granted for one year.

Miss Cynthia Iliffe, CNAA registrar for business and social studies, said in her letter to Mr Terence Miller, the polytechnic's director, that the Sociological Studies Board has only agreed to extend approval for a further year from September, 1978.

The board was hopeful, she said, that following a successful resolution of the current problems of the course, the remaining three-year approval to the full five-year term would be possible.

"I am asked to tell you that members were disturbed to learn of the academic ethos currently prevailing in the department which was understood to be such that the opportunity for free and open discussion of course content and course organization was seen by some members of staff to be severely limited", she said.

"While members did not feel that the academic environment of the course had deteriorated to a state inappropriate for a programme of study leading to the council's award, they were strongly of the opinion that the environment and organization of the course and their effect on the content of the degree did give cause for serious concern which members would not want underestimated."

Members have welcomed suggestions for a partial course review and revision and would not consider further reviews that might be necessary as a result of the partial revision "inappropriate".

Mrs Iliffe says that the board expected that consideration of the course syllabuses should focus on the balance of the course in terms of plurality of perspectives offered, internal coherence, progression and the opportunities offered for students' academic development.

Members were aware, she said, that some staff members have felt that their views on course content in relation to students' academic development have not been fully heard.

Mr Noel Parry, the new incoming head of the department who takes up his appointment in April, said that if some members of the department felt the course was unbalanced then it was his duty to ensure that "all voices are heard and that a proper balance in the course is maintained."

Clinical medicine course extended

The recently launched short-length course in clinical medicine at Cambridge University is to be extended.

In the latest issue of *Cambridge University Reporter*, the faculty board of clinical medicine has called on the university to extend the course by nine weeks. However, the secretary of the clinical medicine school, Mr Jeremy Howe, said it would still remain one of the shortest of such courses in British universities.

He said there were two main reasons for extending the time of clinical medicine study.

The first was academic, for the course was too tight and more time was needed for the study of some subjects—particularly pathology, epidemiology, preventive medicine and general practice. The board also say there is a need for a revision period free from teaching immediately before part one of the final M.B. exam.

The other reason relates to the starting dates of house officer appointments. From 1979, these appointments will be taken up on either February 1 or August 1 in Britain. With Cambridge releasing its students in October or present, they will be at a disadvantage compared with other universities' medical students. When the clinical course is extended by nine weeks this will release students in December in good time for the February intake.

The clinical course at Cambridge is now in its second year. Previously, students studied three years preclinical medicine at Cambridge and then spent a further three years on clinical courses outside Cambridge—mostly in London.

The new arrangements will not affect students until the September, 1979 intake.

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New professor blames the universities

by Judith Judd

University-domination of the school curriculum has deprived working class children of a fair chance in education, Professor Peter Herriot said in his inaugural lecture this week.

Professor Herriot, professor of psychology at City University, said: "It is academic education and not education based on skills which maintains the present rigidities of our social class system.

"A skill-based education would enable people to use and develop their abilities. Academically based education has resulted in little change in the proportion of working-class students in higher education in the last 25 years."

In an attack on the academic bias of education, he blamed the universities for the poor image of people who made things.

They had controlled the curriculum in schools through their hold on the examination system. Early specialization, too, had resulted from "the universities baneful influence on the curriculum".

The division of knowledge into arts and science had ignored what most people spend their lives doing —making things or helping to make things work for the benefit of others.

He did not want so-called artists and so-called scientists to talk to each other a bit more, as C. P. Snow had suggested. "I want the whole apparatus of academic education including the arts and science distinction, to be dismantled; they are, after all, only the distinctions made by university scholars for their own convenience."

Professor Herriot said that some of the attempts to further professionalize the doing and making occupations might reinforce the present nature of the education system.

"Producing super-graduates who have tackled a yet more academically demanding degree course in certain selected centres of excellence will likely create yet another gradation in the academic hierarchy."

Another reason for not trying to professionalize the skills of making and doing in order to attract young people was that students were not particularly motivated by salary and status.

Birmingham dean

Professor Owen Wade has been appointed next dean of medicine and dentistry at Birmingham University. He will succeed Professor Brodie Hughes whose term of office expires in September.

Professor Wade is an expert on drug safety control and has been head of the department of therapeutics and pharmacology since 1971. He was educated at Repton, Cambridge and University College Hospital London. After lecturing at Birmingham, he was appointed to the newly created Wheris chair of therapeutics at Queen's University, Belfast.

Tories call for changes in science policy

by Robin McKie
Science Correspondent

The Conservative Party has called for urgent changes in Government science policy and education to improve the quality and numbers of trained engineers in industry.

In a report, *Science, Education and Industry*, Jafun Ranelagh, of the Conservative Research Department, argues that the country can no longer afford to neglect "the importance, status and prestige" of engineers. A new approach to science is needed if Britain is to remain a successful industrial nation.

"The fundamentals must continue to be taught, but we can no longer support curiosity-motivated research more than is necessary to keep this teaching alive", he says.

Ranelagh calls for greater use of the Open University's resources. Its booklets, television and radio programmes could be used by teachers in other higher education institutions and several first-year courses could help at schools and on teacher-training courses, particularly with chemistry and mathematics.

Serious consideration should be given to the re-creation of the office of Minister for Science or to the possibility of appointing a Minister of State responsible for science within the Department of Education and Science.

Ranelagh believes that teaching has concentrated too much on theory and not enough on the practical application of design to everyday life and everyday problems. Engineers are required to translate theory into practice yet we are employing and training more accountants, social scientists and pure scientists.

Schools simply do not teach engineering, he points out, let alone metallurgy. While some applied science subjects may be too complicated for the early years at school, at least pure science could be taught with more emphasis on practical application.

"We must start the job of producing high-quality engineers in the schools and thus the institutions of higher education do not have to produce them from scratch", Ranelagh says.

However, increased numbers of graduate science teachers in secondary schools are needed first of all because in recent years universities have been producing more arts and social science graduates than ever.

In order to rectify this imbalance, Ranelagh suggests that larger grants should be awarded to people who want to study as maths and science teachers. In addition, industry and Government departments could be encouraged to release scientifically qualified staff for periods of teaching in schools. This could be done by introducing a scheme of tax relief and grants for employers and employees.

Polytechnics, although expected to be more industry based than universities, have not developed in this way because the Labour Government's 1966 White Paper, *A Plan for Polytechnics and other Colleges*, did not make this clear. Instead they have grown up to be very similar to universities and face broadly the same problems.

British industry's serious lack of high quality engineers could also be improved by companies giving more prestige and better career opportunities to engineers—and by allowing them to penetrate to senior management.

Ranelagh concludes: "As a matter of utmost urgency, Government and the education system must concentrate their organizing efforts to provide industry with the engineers of quality that are required and make industry recognize this requirement. Then we shall be able to afford what Lord Todd described as the 'steel core' for pure science on which much of the future may depend".

£800,000 grant goes to oncology unit

An £800,000 grant from the Imperial Cancer Research Fund is to be used to set up a medical oncology unit at Edinburgh University. The money will be handed over next week to the university's acting principal, Professor Derrick Sout, by the chairman of the fund's council, Sir Eric Scowen.

The new unit will consist of a professor with supporting staff and will concentrate on the medical care and management of patients with forms of cancer selected for treatment and study.

Advice service for mature students

by Maggie Richards

A new educational guidance service to aid mature students has been established in Hertfordshire. Based at the careers advisory service centre adjoining Hatfield Polytechnic, the new service is being staffed by two educational counsellors and is open five days a week.

It has been designed to offer free advice to adults wishing to re-enter or continue their education, or to advise on leisure activities. The service is also providing an assessment process for mature students, to establish their suitability for a particular course or programme.

Links have been established with Hatfield Polytechnic and the Open University, as well as with university extra-mural departments, the county careers service, and other providers of adult education.

Local counsellors are being appointed to most of the colleges of further and higher education in Hertfordshire, to provide a county-wide network of advisors.

Senior tutor for continuing education at Hatfield Polytechnic, Mrs Ruth Michaels said there was an obvious need for guidance at all levels, ranging from literacy classes to degree and postgraduate courses.

Norfolk hardship fund

Open University students facing the prospect of financial hardship in Norfolk will be able to make application to a special fund. The county's further education sub-committee has set aside £2,500 to help OU students with financial problems.

Harry Towb (left) and Douglas Lumberi in Edward Allee's "The Zoo Story" which is being performed next week at the Portland Theatre of the Polytechnic of Central London. The production is being put on by the American Studies Resources Centre which is part of the polytechnic's school of communication.

Overseas advisory bureau to close in the spring

by Peter David

The Overseas Student Advisory Bureau, set up in 1963 to help overseas students looking for practical experience in British industry, is to close down in the spring when its grant from the Government comes to an end.

An annual grant of less than £30,000 from the Ministry of Overseas Development terminated for more than 70 per cent of the bureau's income, and the decision not to renew the grant when it expires in April means that the bureau will be unable to continue its work.

Mr David Grantley, the bureau's director, said that one of the reasons for the ministry's decision was that while the bureau traditionally concentrated on the needs of privately financed overseas students, Government policy had shifted in favour of aided students from poorer countries.

He added: "In the light of the policy they have chosen, the ministry is perfectly entitled to decide on their priorities. My personal view on the other hand, is that their policy of neglecting privately financed students is short-sighted from the point of view of both trade and aid."

The advisory role of the bureau will be taken over by the United Kingdom Council for Overseas Student Affairs (UKCOSA), which is the national coordinating body for overseas student affairs. But the council will not be able to continue the bureau's placement programme for students seeking practical experience in industry.

Mr Rupert Bristow, UKCOSA's deputy general secretary, commented: "It is unfortunately a bad thing for overseas students that the bureau is closing down. Its raison d'etre was finding placements for students for industrial training, and they have been difficult to find because of the economic situation. But it is also provided expert advice to overseas students, and its closure will be a loss to the overseas student field."

Maths diploma colleges named

by Simon Midgley

The names of the first colleges to offer the new diploma in mathematical education have been announced. Although 58 colleges, mainly concerned with teacher training, have already expressed interest in offering courses for teachers who wish to gain the new Mathematical Association diploma, so far only 12 have received approval to start two year part-time courses in 1978 or 1979.

These are: Westminster College, Oxford; Matlock College; Bishop Grosseteste College, Lincoln; Rolle College, Exmouth; West London Institute of Higher Education; Homerton College, Cambridge; Derby Lonsdale College; St Mark and St John College, Plymouth; Roehampton Institute of Higher Education (Southlands College); Keswick Hall College, Norwich; Milton Keynes College of Education; and Hertfordshire College of Higher Education.

It is expected that the association's diploma board will give approval to more colleges wishing to offer the course in the next few months. The decision to establish a new qualification at diploma level in mathematical education was taken at the association's annual meeting in Exeter, 1977.

Intended for experienced teachers the diploma will place special emphasis on work in first, junior, middle and junior high schools. Courses will have strong links with the classroom: the assessment will include a project based on observation of some aspect of children's learning of mathematics, and the mathematical content will be chosen with the aim of developing appreciation of what is taught to children in the appropriate age range.

The Mathematical Association will act as a validating and awarding body for courses devised, taught and assessed in local colleges and other institutions.

Negotiations are in hand with the appropriate bodies about the recognition of the diploma for incremental credit on teacher salaries, and its status in relation to other qualifications for teachers such as the BEd degree.

The diploma board, which approves courses and monitors standards, consists of 15 unpaid members drawn from a wide cross-section, including primary and secondary teachers, lecturers and local authority advisers. The chairman is Mr Peter Reynolds, adviser for mathematics in Suffolk.

NATFHE organises history course

A short residential course on the teaching of history in further and higher education is being organized by the history section of the National Association of Teachers in Further and Higher Education (NATFHE) in conjunction with the Historical Association.

It will represent the first major effort of the NATFHE history section following the absorption of the old Association of Teachers in Colleges and Departments of Education (ATCDE) subject sections.

The aim of the organizers is to develop a forum where all teachers of history involved in further and higher education may meet to discuss their common interests. The course, from July 11 to July 14, will be structured around three lectures and four separate seminar groups.

Lord Briggs, Provost of Worcester College, Oxford, will lecture on history at the universities; Dr Robert Murray, Assistant Chief Officer and Registrar for the Council for National Academic Awards (CNAA) on history at the polytechnics; and Dr Clive Church, of Lancaster University, on course validation.

Seminar groups led by other tutors from universities, polytechnics, department of education or further education colleges will consider a range of topics relating to preparation for higher education, the history curriculum and examination in further education, and aims methods and resources in history teaching.

The intention is that each seminar group should produce course papers which the NATFHE history section will publish. The committee will be seeking the views of course members on the kinds of developments which they would like their section to promote in future.

Opportunities will also be provided for informal meeting outside lecture and seminar sessions and one afternoon has been set aside for trips of historic interest.

The course will take place at St Mary's College, Strawberry Hill, Twickenham. Anyone interested in attending should write for further details to Mr A. M. Dyer, secretary of the history section and head of the history department at St Mary's College.

NUS submits plans for 40,000 extra teachers

by Peter David

In an unusual mixture of direct action and detailed argument the National Union of Students this week called on the Government to employ an extra 40,000 teachers by 1980, create another million part-time places for the 16-19 age group and save threatened teacher training colleges for educational purposes.

The students' proposals were contained in a lengthy submission given by Mr Oakes, Minister of State for Higher Education, after a morning-long picket of the Department of Education and Science on Wednesday. Later students met MPs to put the case for saving colleges of education threatened with closure.

According to NUS calculations, only 19 of the 29 teacher training colleges threatened with closure have so far been found alternative educational uses. "The remaining 20 represent an enormous physical resource which can be used to expand provision in the post-school education sector and to provide vital support services."

The NUS scheme envisages using the threatened colleges for curriculum development and training programmes serving a much-expanded further education system which would offer all school-leavers a choice between work or college based training.

By creating a million extra opportunities for young people to study, the NUS claims, the Government could provide education and training for 90 per cent of the 16-19 age group by 1982. This would be achieved by a phased introduction of 250,000 part-time places every year from 1979.

"These places would be open to young workers and unemployed school leavers and would consist of day and block release courses and additional places under the Manpower Services Commission programme."

Also called for in the submission is a review by the Government of its plans for the size of the teacher force in the 1980s. The NUS argues that the level of cutback in teacher numbers proposed by the DES will prevent the education service from responding to the upswing in the birth-rate expected at the end of the decade.

The students accuse the government of failing to take account of the training requirements of further education teachers, and call for implementation of recommendations that all new further education lecturers with no pre-service training and less than three years' experience should undergo induction training.

They add: "The eventual aim must be for all new entrants to the further education teaching force to have undergone pre-service training. Allowance for this must be made within the number of teacher training places offered, including an increase in the number of places available at the specialist colleges."

Union branch head resigns over national 'interference'

by Simon Midgley

The former chairman of the National Association of Teachers in Further and Higher Education's branch in Ulster College has resigned from the union in protest against the "uncompromising attitude" of NATFHE headquarters.

Dr Brian Eggins, an elected staff governor of the college—the Northern Ireland Polytechnic—and a delegate to the Northern Ireland Divisional Council of the NATFHE for the past three years, is also concerned by what he describes as "interference" in the affairs of the branch.

In particular, he feels that NATFHE headquarters have taken an uncompromising attitude towards the question of setting up joint negotiating machinery with the fledgling Association of Polytechnic Teachers (APT) and the management of the polytechnic.

Negotiations at the college aimed at the creation of a joint staff/management panel to discuss local conditions of service have broken down following the refusal of the NATFHE branch to accept APT representation on the panel.

At present NATFHE national policy is that no such joint negotiations should take place, particularly in circumstances involving conditions of service where NATFHE and other teachers' unions in the further education sector are negotiating national agreements on which local agreements are based.

Dr Eggins is particularly concerned because he says the results of a ballot/questionnaire circulated among NATFHE branch members earlier this year revealed that 77 per cent of those who replied were prepared to negotiate alongside APT. He is also concerned about the "interference" of Mr Stan Broadbridge, NATFHE general secretary, who wrote to all branch members when he heard their views on joint negotiations were being sought.

Mr Broadbridge advised them that it would be most unwise for branches to deviate from the association's stated policy towards the APT, until the outcome of the ACAS (Advisory, Conciliation and Arbitration Service) inquiry and any recommendations on the issue of recognition was known.

Referenda have been conducted by the service at Manchester, Portsmouth and North London polytechnics in an exercise to enable ACAS to decide whether to recommend that the APT should be recognized in negotiations about conditions of service at local level. Reports of these inquiries were due to be considered by the ACAS council on Wednesday afternoon.

The results of the questionnaire are unlikely to influence local branch or national policy towards the question of joint representation with the APT, following Dr Eggins's failure to be reelected chairman at the branch's annual general meeting earlier this month.

Mr David Montgomery, the new chairman, is critical of the former chairman's behaviour in this matter. He says the decision to circulate a ballot or questionnaire was taken without reference to the views of any other committee members.

Dr Eggins, he said, had chosen to ignore a unanimous decision of a branch meeting not to enter into any negotiations with the APT until the results of the ACAS investigations were known.

Leeds University's new building for economics and social science departments was "tipped out" last week by the vice-chancellor, Lord Boyle of Handsworth.

'Failure to define objectives'

by Robin McKie

There has been a failure to define educational objectives in the teaching of medicine, pharmacy, dentistry and veterinary science, Sir Frank Hartley, vice-chancellor of London University, said last week.

Delivering the Wilkinson lecture to the Institute of Dental Surgery, Sir Frank warned that this failure had led to unsatisfactory student response to the multidisciplinary requirements of their courses. Qualification in these disciplines needed a broad experience of physical, biological and social sciences for their ultimate vocational application.

"The best students merely need the opportunity to learn and good students learn much from each other, but as teachers we have to create the means whereby they can do so more effectively and efficiently", he said.

Sir Frank said too few teachers gave sufficient thought and preparation to other forms of teaching while most of them spent several hours preparing a lecture.

"The possibilities of programmed learning and the development of educational technology, through audio-visual aids, have caused many of us to examine critically how we could improve our teaching so that others may do better than we have done."

Once there has been an improvement in defining educational objectives and the means of realizing them, there will still be scope for further specialization and the need for practitioners to cope with the new developments throughout their subsequent professional life.

"That is why all professions have had to be concerned with postgraduate, post-experience and refresher courses whether leading to further academic qualifications or not."

Sir Frank urged the professions —particularly those related to medicine and which rely upon a university degree for their academic basis—to realize their scope for reviewing their own education and training.

Oxford poetry jamboree starts

Oxford University authorities this week signalled the start of the five yearly jamboree for the election of a professor of poetry.

The present holder, Mr John Wain, 53, poet, novelist and critic, retires on November 21, and in the normal course his successor would take over from that date—at a salary of £1,081 a year.

The duties are to give a lecture in each of the three terms of the university year, and to deliver the Creweian Oration at the Encaenia in alternate years.

"This is not a very convenient date for a change", says an announcement by Hebdomadal Council in this week's University Gazette. Council has made a decree providing that in future the professor of poetry will hold office for five years.

Contest for places gets keener

by Judith Judd

Competition for university places is becoming tougher, according to the latest report of the University Central Council on Admissions published yesterday.

The council's fifteenth report, which covers the 1976-77 academic year, says that applications from final A-level students went up by 8.4 per cent compared with an increase in acceptances of 5.5 per cent. If these are related to the increase of 2.1 per cent in the age group, the report says that there is an apparent growth in the degree of competition for places.

This trend is even more noticeable in the clearing house stage where the percentage of applicants accepted has gone down from 41.1 per cent in 1975 to 38.7 per cent last year.

The total number of applications went up by 7.9 per cent compared with the previous year to 153,616. This was the third consecutive increase after a period of several years when there was little change in the number of applicants.

The report says that, though most of the candidates accepted through the clearing house in the past three years have been of similar standard, in a few subjects—medicine, architecture and veterinary science—there has been a slight increase in the quality of candidates.

"There is certainly no evidence to suggest that the standard of accepted candidates—in so far as this can be measured by examination grades —is in any way falling."

Last year was the first year since 1969 that the percentage increase in overseas candidates was less than the percentage increase in home candidates, a sign, perhaps, that the effect of increased tuition fees is beginning to be felt. The number of overseas candidates went up from 20,503 to 21,569, or 5.2 per cent.

The proportion of women applicants also rose. Women now represent 36.7 per cent compared with 36.2 per cent in the previous year. UCCA's *Fifteenth Annual Report*: 65p post free from UCCA, PO Box 28, Cheltenham, Glos., GL50 1HY.

Lord Boyle

Universities and the future

Lord Boyle, vice-chancellor of Leeds University, chairman of the Committee of Vice-Chancellors and Principals, and a former Conservative Minister of Education, will be one of the speakers at a conference on the universities and Britain's future being jointly sponsored by the Association of University Teachers and The Times Higher Education Supplement. It will be held on Thursday, February 23, at the University of London Institute of Education.

Also speaking will be Mr Oakes, Minister of State at the Department of Education and Science with responsibility for higher education, and Mr Derek Robinson, chairman of the Social Science Research Council. Both sides of industry will also be represented. From the Trades Union Congress Mr R. A. Jackson, the education officer, and Mr D. E. Lea, assistant general secretary, will speak, and for the Confederation of British Industry Mr Terry Dean of British Aerospace, a member of the CBI's higher education panel and of the Standing Conference of Employers of Graduates.

The morning session will be devoted to the general theme of the universities' contribution to Britain's future and the afternoon session more specifically to research. At the end of each there will be periods for general discussion.

Attendance will be by invitation. Among those invited are vice-chancellors, polytechnic directors, members of the University Grants Committee, MPs, senior officials at the Department of Education and Science and other Government Departments, members of research councils, representatives of the National Union of Students and other teachers' unions and of the local authority associations, and leaders of industry.

The Oakes report 'could bring tighter controls'

by Peter David

The Oakes report on the management of higher education in the public sector could result in much tighter control of spending in polytechnics and colleges, a member of the Oakes committee said last weekend.

Councillor M. E. Venn, chairman of the Regional Advisory Council for London and the Home Counties, told a meeting of the British Educational Administration Society that the partnership between local authorities and their institutions would remain "fairly tight".

He said it was erroneous to link polytechnics' demands for autonomy with the issue of academic freedom. Although the educational and administrative aspects of an institution could never be entirely separate, some division of financial and operational functions was possible.

Local authorities should continue to lay down the broad financial arrangements for polytechnics and colleges, he said. But institution's budgets should have a minimum number of headings, and colleges should be allowed considerable freedom to transfer money from one budget head to another.

Local authorities should also be allowed to lay down financial regulations to assist the smooth running of institutions. The regulations would cover the way estimates were submitted, auditing requirements, the definition of authorized expenditure, staffing establishments, rates of pay and the way goods and services were handled.

Colleges' residential and catering operations, for example, should be related to the local authority's activities, and minor works should be brought in the local authority's remit.

He added: "Above all, we can best improve the management at institutional level by clarifying the relationship between the governing body, the academic board and the staff of the institution."

Councillor Venn said that the single-course approval system currently operated by regional advisory councils was likely eventually to be replaced by a "rolling plan" system of course approvals. But he denied allegations that regional advisory councils caused unnecessary delay in the approval of courses.

"We can turn a course around in three months. The rest of the delay is due to the validating bodies and to nobody else. I am not just picking on the Council for National Academic Awards —that there's something of a log jam there."

Spending cuts pushed up prices of technical books—publishers

by Maggie Richards

Book prices have in general risen less than the cost of living in recent years, according to the Publishers Association. But in its submission to the Prices Commission, which is conducting an investigation into book prices, the association reports that prices of technical books have spiralled.

It says cutbacks in public spending have led many local education authorities to reduce their orders, and so push up the cost per copy. World inflation and devaluation have also led to higher prices for imported technical books, the submission adds.

The association also warns that the complex and competitive nature of the industry makes it a highly speculative business. Some titles are very successful and profitable, but others in terms of commercial results, are considered failures.

"In order to publish new 'high risk' titles, a successful publisher has to have a sufficient range of profitable titles to produce the necessary financial backing."

The submission also lists other costs which have contributed to higher prices, including escalation of paper prices, rapidly rising printing costs, and the wages explosion of the early 1970s.

It outlines other factors which specifically affect the price of technical books. These include demand for regular updating; revision of texts for decimalization and metrication; and the rapid growth of reprographic facilities.

The association says that while it may theoretically be possible to rationalize the publishing trade, one of the major values of the industry is the ability and willingness to offer a wide range of titles of all kinds.

Dealing with the export potential of the industry, the submission points out that the international market for English-language books is growing fast and needs full support from the Government.

"The industry is an important export industry in its own right, and also because of the additional trade it stimulates; the domestic and export markets are inextricably interlocked and a loss of profitability on either would have damaging consequences for the other", it reports.

The submission also records that in 1976 the industry had a turnover of £406m, of which £175m—43 per cent—was derived from export sales. Turnover increased by 2.4 times in real terms between 1950 and 1975, and by 10 per cent between 1974 and 1976. Export sales during the same period increased 3.2 times, and by 11 per cent between 1971 and 1976.

Socialist call for shift of emphasis

by Simon Midgley

The huge untapped resources of higher education institutions should be made available for mass education, Mr Eric Robinson, principal of Bradford College and vice president of the Socialist Educational Association, said in an address to a National Organization of Labour Students conference last week.

Criticizing the Labour Party for approaching a General Election on a defensive attitude and policy towards education, he calls for an urgent review of basic ideas and priorities by the party's national executive. The vital need was for a shift of emphasis from higher education to further education.

"We lack both the will and the courage to take on the academic establishment and insist that the huge underused resources of higher education institutions are made available for mass education," he said.

"Even many right-wing economists at home and abroad tell us that our economic prosperity is seriously hindered because our educational provision is so unequal that Britain is too preoccupied with an elite and too neglectful of the rest.

"We have a wealth of skill at the top of the system and an appalling dearth in the middle and at the bottom. In the schools this is related mainly to our failure with the lower streams and the poor localities. Beyond school there is gross inequality of educational provision and a disgraceful neglect of those who leave school at 16, coupled with the relative pampering of the elite in sixth forms and universities."

Comprehensive education was a mockery so long as it led into a highly class structured work force with training and careers for some, jobs for others and limbo for the rest.

Too often the education system was destructive of individual dignity, insufficiently concerned with preparing young people to meet the demands of the real world, and generally antagonistic to popular power.

The party should take a tough line against classroom violence by both pupils and teachers, give clear priority to practical studies and insist that schools and colleges should promote and practise democracy.

Fall in students entering architecture

The number of first-year students entering architectural courses has fallen for the second year in succession, according to statistics just published by the Royal Institute of British Architects.

Returns also show the number of students sitting and passing the final part of their examination has dropped dramatically.

RIBA says the statistics should be viewed against a background of increasing unemployment in the profession, and the difficulties students are encountering in obtaining practical training. The statistics reveal the intake of first-year students has declined by more than 8 per cent, when compared with figures for 1976-1977. The intake has declined by more than 12 per cent since the peak was reached in the 1975-1976 session.

New information collected on women students shows that female intake to architectural courses has almost doubled over the past two years—from 7 per cent in 1967-1968 to 13 per cent during the current period.

But for the most recent year on which there are comparable statistics, 1974-1975, only 18 per cent of new architectural students at universities were women, compared to 36 per cent for all disciplines.

Women constitute only 5 per cent of the profession at present. Figures for new registrations with the Architects Registration Council, which confers the right to practice, show that only 7 per cent were women in 1977.

Education Statistics 1977, published by the Statistics Section, RIBA, 66 Portland Place, London W1N 4AD.

North American news

Need for strong science policy is re-emphasized

from Clive Findlson

North America correspondent

WASHINGTON

The implementation of a national science policy for Canada has reached "the take-off stage" after several "wasted years".

That is the mildly hopeful conclusion of an otherwise gloomy final report from the special committee on science policy set up by the Canadian Senate 18 years ago. The committee, chaired by Senator Maurice Lamontagne, completed its original work in 1971 but reconvened for a second "post-mortem" inquiry that lasted from 1975 to 1977.

It found that until 1976 the government did very little to implement the recommendations of its first report or to correct the imbalance in Canada's research expenditure.

For example, industry carries out only 40 per cent of the national research effort; the corresponding figure in most western countries is about 60 per cent.

The Lamontagne committee compared Canada and Scandinavia, which have almost the same number of university researchers. Canada had 9,000 more research workers in government laboratories and 20,000 fewer in industry in 1973; the position has not changed much today.

The committee recommended six years ago that the government should use industry and the universities to meet as many of its research and development needs as possible, but this policy was not adopted for all scientific activities until last year. The senators now recommend its application to universities as quickly as possible.

The extension of this "make-or-buy policy", as it is obscurely known—an official at the Ministry of State for Science and Technology (MOSST) says they are trying to drop the expression and adopt "contracting-out" instead—is one recommendation intended to benefit university researchers.

Another is a suggestion that the government increase the research councils' expenditure by 12 per cent a year over the next five years. Their 1977/78 budgets did indeed rise this amount—which was not nearly enough to compensate for the seven previous lean years when the increases were consistently less than the inflation rate—but there have been rumours that the 1978/79 science budget may go up considerably less.

The Senate committee foresees "an imminent crisis in the government and university sector that is seriously threatening our national research capability". Canada may lose a whole generation of researchers, it warns, unless the government's austerity programme and the lack of job mobility among researchers.

Legislation to reorganize Canada's research councils, as recommended by the senate committee five years ago, was eventually passed last summer, but the government has not yet set up the new councils. The delay is causing increasing concern to the country's academic and scientific communities, which say the uncertainty and lack of leadership are handicapping research activities.

When the legislation is "proclaimed", the existing National Research Council will keep control of its own laboratories while its granting functions pass to a new Natural Science and Engineering Research Council, A new Social Science and Humanities Research Council will be hived off from the Canada Council, which is to retain its responsibility for the arts. The Medical Research Council will remain in charge of the health sciences.

Canada's Ministry of State for Science and Technology was established in 1971 to formulate national science policy and coordinate federal activities in science and technology. The senators say they "anticipated that the Ministry of State would become a dynamic agent for change and that action on our other recommendations would soon follow. However, our expectations were not realized."

MOSST has suffered from internal instability with frequent changes of Minister (five in five years) and top officials, but the senators believe it is at last beginning to do some useful work.

They urge it to set targets for the size and distribution of Canada's scientific activities to be reached by 1982. The committee originally proposed spending 2.5 per cent of the GNP on science by 1980. Now it suggests a more realistic goal of 1.5 per cent by 1982—a figure that would still leave Canada near the bottom of the list of western nations.

Ontario staff concerned at human rights code

University teachers in Ontario are upset about what they take to be a possible threat to their academic freedom posed by a proposed new human rights code for the province.

The Canadian Association of University Teachers (CAUT) and the Ontario Confederation of University Faculty Associations (OCUFA) have read into the proposals submitted to the provincial government by the Ontario Human Rights Commission "a suggestion that Ontario universities be required by law to promote the commission and the Ontario human right code.".

"We believe it is fundamentally wrong to require the universities to disseminate a particular political view to students, no matter how morally uplifting that view might be perceived to be," OCUFA says.

The commission, set up in 1962, says the two organizations have misconstrued its recommendations. The report does say that scholars need to devote much more attention to human rights in teaching and research. "But the commission would be loud against any suggestion that any one particular point of view should be propagated in universities", says its chairman, Dr Thomas Symons.

The two teacher organizations are also uneasy about the commission's proposal that textbooks and learning materials should be carefully reviewed to ensure that they are accurate and sensitive to minority history, customs and values, and that prejudice and discrimination are not recycled and perpetuated.

"While everyone agrees with the spirit of this proposal, it is not clear who is to give the required careful attention to reviewing and revising textbooks and other materials", says CAUT.

"Nor is it clear whether the commission's recommendations include university curricula and courses. This lack of clarity as well as the ominous shadow of censorship disturbs us."

However, Dr Symons says the commission has made it quite clear that the recommendation about textbooks is directed at schools: "Where has been a problem with many textbooks used in Canadian schools that have consciously or unconsciously conveyed racial and sexual stereotyping."

Apart from their reservations about academic freedom, CAUT and OCUFA have reacted enthusiastically to the commission's proposals for strengthening and updating Ontario's 16-year-old human rights code, which was the forerunner of those of other Canadian provinces.

For example, they agree that nationality, sexual orientation, family relationship and marital status should be included as grounds on which discrimination is prohibited.

They want universities to be placed clearly under the code as long as the definition of citizenship allows them to "hire qualified foreign scholars consistent with current guidelines on the Canadianization of universities".

They have requested, too, an exemption for universities from requirements for the handicapped until the Ontario government gives them funds to make the necessary alterations to their buildings.

Unionization shows signs of slowing

from our own correspondent

WASHINGTON

The last year has seen the lowest rate of academic unionization in the United States since the process started in 1966. The nation's three teacher unions gained collective bargaining rights in only seven four-year colleges and universities during 1977.

A report by the University of California's Faculty Union project at Berkeley shows that for the first time last year more four-year institutions rejected than accepted collective bargaining.

In eight elections involving 2,300 faculty members a majority of votes were cast for "no agent" rather than the American Association of University Professors, National Educational Association or American Federation of Teachers.

Twenty-three two-year colleges recognized bargaining agents during 1977, but 21 of them were in California where the state legislature has permitted collective bargaining in its community colleges in 1976. Three two-year colleges voted against unionization.

The seven four-year colleges unionized last year accounted for 2,600 academics, bringing the national total to 81,570 people organized in 196 institutions. Another 51,500 teachers work in the 290 unionized two-year colleges.

Estimates of the percentage of American academics who have been "organized" vary, depending whether part-time staff, librarians and so on are included, but the overall proportion is thought to be roughly one quarter. It is higher in the community colleges and lower—perhaps 15 per cent—in the four-year sector.

"It is possible that some of the impetus behind the movement to unionize has diminished, but a more probable explanation is the saturation of the market for unionization in the states with supportive collective bargaining laws", according to Professor Joseph Garbarino director of the Berkeley project, and its staff associate Dr John Lawler.

Virtually every public institution of higher education is already organized in the states of Massachusetts, New Jersey, Connecticut, Rhode Island, New York, Delaware and Hawaii, they say.

In Michigan, Pennsylvania and Minnesota the whole four-year public sector is unionized except for the major research universities. In Florida, all four-year colleges are unionized but most of the community colleges are not.

"In the absence of an expansion of collective bargaining rights for faculty into new states, faculty unions will find continued slow going. The 1976 bargaining law covering California community colleges dramatically demonstrated the importance of legislative extension in 1977", the Berkeley researchers report.

Dr Marton Baratz, general secretary of the American Association of University Professors, predicted CHES, January 13) that very few of the 26 states that do not permit unionization of public colleges would pass collective bargaining legislation in the near future.

However, Professor Garbarino expects "creeping unionization" of American higher education to continue, with perhaps another 25 to 30 per cent of the country's academics organized into collective bargaining units in five years' time.

He thinks the collective bargaining movement will reach the nine campuses of the University of California and the 19 of the California State University and Colleges this year. University staff are almost the only state employees in California who are not yet unionized and the legislature was widely expected to extend collective bargaining rights to them last year.

In the event the necessary Bill was rejected by the state senate's education committee. However, the University of California Board of Regents, which had opposed collective bargaining for its employees, very recently changed its mind, on the chances of the unionization law passing the senate in 1978 are better than ever.

Of course, the fact that academics are permitted to form a collective bargaining unit does not mean that they will immediately vote for unionization. But Professor Garbarino points out that the political pressure on faculty members to do so becomes very strong if they are the only significant group of state employees not represented by a union.

One important development in the states most sympathetic to trade unions is the spread of the "agency shop". In this form of closed shop all employees in a bargaining unit have to pay dues to the union that negotiates their pay and conditions with the employer, whether or not they want to join it.

"This does not affect the statistics in union coverage, but the growing number of states mandating at least permitting agency shop provision are doing a great deal for the financial solvency of the faculty union movement", Professor Garbarino and Dr Lawler say.

But, Professor Garbarino says, faculty unions do not take the opportunity to boost their income in this way unless they are confident of support. If a bargaining agent that has won a narrow victory in a bitterly fought election then requires all faculty members to pay it dues, it risks provoking such an adverse reaction that its opponents may be able to succeed in having it "decertified" at another election —as has happened more than once.

Veterinary schools continue to grow in popularity

Entry into American medical schools may be notoriously competitive but, statistically, it is twice as difficult to get into veterinary college here.

The overall proportion of applicants accepted by the United States 120 medical schools has crept up from a low of 35.3 per cent in 1974/75 to an expected 38 per cent this year, as the pool of candidates has dropped slightly and universities have expanded their medical facilities.

Comparable figures for the 22 veterinary colleges are not available, but the most recent estimate of the acceptance ratio was 15.3 per cent in 1975/76.

The American Veterinary Medical Association's Washington representative, Dr W. M. Decker, who carried out the survey, says the percentage has not changed much in the subsequent two years. If at all, it may have risen slightly.

The veterinary profession is now widely regarded as the most difficult of all to get into, and there are frequent stories of students having to settle instead for medical school.

Dr Decker says that interest in the field has been growing steadily since the early 1950s. Successful applicants now have to be "academically outstanding".

One reason for the growth, he says, is that veterinary medicine is "a field in which one can still practise medicine in a non-institutionalized way".

Some students, Dr Decker suggests, have been attracted in veterinary studies by the subject's "relationship to their ecological and environmental interests". He mentions as a third factor its appeal for the rapidly growing number of women students. Others think James Herriot's best-selling books like *All Creatures Great and Small* have had an effect.

American higher education is always ready to respond to student demand, and the number of veterinary colleges in the United States has risen from 18 to 22 over the past five years, with several more at various stages of planning. Total enrolment for all four years of the veterinary course is currently 6,900.

Canada has just three schools, at the universities of Saskatchewan, Montreal and Guelph in Ontario, but a fourth has been proposed to serve the Atlantic provinces. The country has 1,000 veterinary students this year.

Traditionally, veterinary schools in the United States have been associated with the land-grant colleges, the originally agricultural state universities set up in the late nineteenth century, and 20 of the 22 colleges are associated with state universities. The two private schools are at Tuskegee Institute, an independent black university in Alabama, and the University of Pennsylvania (whose veterinary school is exceptional in being closely linked to the university's medical school rather than the faculty of agriculture). A third independent veterinary college opens next year at Tufts University, Massachusetts.

States that do not have veterinary schools train veterinarians (as veterinary surgeons are known in the United States) by sending them to out-of-state schools and paying most of their tuition fees.

The states' motives for expanding veterinary education are two fold: to meet the student demand and to alleviate an alleged shortage of rural vets.

Farmers, especially those with dairy herds, maintain that there are far fewer vets prepared to come out to treat their animals today than there were 10 or 20 years ago. "We have a lot of veterinarians, but there are very few who will practise on large animals", said one farmer. "They can make a lot more money seeing pets when the people bring the animals to them."

The American Veterinary Medical Association is sponsoring a manpower survey of the profession that should answer some of the questions about vets' attitudes to rural work. It is due to be completed later this year.

However, the association does say that some of the advanced specialities like veterinary pathology and veterinary toxicology are suffering genuine shortages.

Indeed, the profession maintains there is a serious shortage of government funds to support research into the health and diseases of economically important animals. The 1979 Budget that President Carter announced last month caused further disappointment: the administration wants to cut back the limited support the Department of Agriculture is giving veterinary research.

'Alternative' campus shuts

Franconia College, a small but controversial liberal arts college in New Hampshire, has closed down—beaten by long-standing financial problems.

The Board of Trustees decided to shut the experimental college two days before its spring semester was due to start. Officials are trying to place the 300 students in other institutions.

Franconia was founded in 1962 to provide an educational alternative to more formal four-year colleges. Students were not graded and they experienced radical new teaching methods. They were fully involved in college government and curriculum development.

Opposition from New Hampshire residents and conservative politicians reached a peak in 1968, when the college was accused of being a centre of drug abuse, sexual freedom and draft evasion.

The college has struggled along under severe financial difficulties for 10 years. Last month, the college President, Dr Ira Goldenberg, reported that it had been unable to pay off a $340,000 deficit from 1975/76.

$500,000 for gay lib research

The Centre for Homosexual Education, Evaluation and Research (CHEER) at San Francisco State University has been awarded a $500,000 grant by the National Institute of Mental Health for the first federally funded study of the violation of civil liberties of men and women who are homosexual or who depart from feminine and masculine stereotypes. CHEER has received $1,200,000 in federal funds in the past year, which, the university says, makes it the United States' major research centre on sexual orientation.

Churches and science

The World Council of Churches is organizing a "World Conference on Faith, Science and the Future" at the Massachusetts Institute of Technology in July 1979. Five hundred scientists and theologians from around the world will take part.

Australia

New president inherits cup of woe

from John Kirkaldy

SYDNEY

The election of Mr Peter Noonan as the new president of the Australian Union of Students (AUS) sees the start of what could be the most important year in that troubled organization's existence.

It is difficult to imagine how 1977 could have been much worse for AUS. In August AUS Travel, which had an annual turnover of A$24m (£14m), went into voluntary liquidation but was eventually rescued by a consortium of airlines led by Qantas.

Legislative and judicial decisions have also hampered the working of AUS. The state government of Western Australia has passed legislation to outlaw compulsory student unionism and a similar move is possible in Queensland.

In November, a decision in the Victorian Supreme Court decided in favour of a case brought by a group of students from the University of Melbourne that student unions should be restricted in their use of funds for political purpose (*THES*, January 6).

Throughout Australia moderate student groups, particularly Young Liberal clubs, have attacked the AUS for its policies, wasteful programmes and support of left-wing causes. Already 11 institutions have seceded from AUS and in several others the majority in favour of remaining affiliated has been small.

Mr Noonan, a 22-year-old student from Western Australia, describes his political position as "independent left". His election by a mere three votes over the moderate candidate, Mr Peter Sandeman, is an indication of the growing polarization on Australian campuses.

Commentators have explained this in a variety of ways. Continuing economic difficulties and high youth unemployment (there are 33 young people out of work for every 10 adults) have certainly been contributing factors.

The AUS budget approved at the council meeting in Melbourne which elected Mr Noonan, also reflected changing times. The budget was cut back from A$714,000 to A$425,000 and the positions of deputy president, services vice-president and trainee teachers' organizer were not filled as an economy measure. This indicates the effect of the secession movement and various legal actions which have cost AUS about A$300,000 in the past year.

The council also heard that AUS Travel lost nearly A$1,550,000 in the last financial year. The auditor's report gave no qualification of a financial nature but criticized the group's communication and documentation system.

AUS Travel has made the first repayment of A$200,000 to the major airlines that baled it out from its voluntary liquidation but its future must remain in doubt. Its balance sheet showed that its liabilities exceeded assets by A$1,480,000, a marked contrast to the year before when it made a profit of A$150,977 and had cash assets of A$1,390,000.

Whether or not AUS can totter into the 1980s is open to question. Mr Julian Glynn, president of the Australian Liberal Federation, has denied that his organization wishes to destroy the AUS. But the federation wants all donations to political causes to be voluntary and compulsory fees to be levied only for essential services and amenities such as cafeterias and sporting facilities.

Israel

'Open University' expands range of courses offered

from our correspondent

JERUSALEM

A record number of 1,129 students have registered at Everyman's University for the new course in psychology which begins next month. Another new course—the Jewish people in the time of the Second Temple—takes second place with 476 students. In the past, pride of place for new courses went to mathematics with 680 students and a course in Jewish studies from Jerusalem to Yavneh—659 students.

Everyman's University, which opened in 1976, takes in a new "class" twice a year, in October and March. Its courses are modular. It works in "terms" of 16-18 weeks, the time required to complete a course. The "class" beginning in March will be the fourth.

The number of academic courses offered has increased from five in the first term to eight in the second, 14 in the third and 24 in the fourth. Of the latter, 10 are in the humanities and social sciences, four in mathematics and 10 in the natural and life sciences.

The new courses include subjects as varied as Talmud; hero and anti-hero in the modern novel; an introduction to music and listening; an introduction to electricity and electronics; vegetation and plants in Israel; and English for students of the humanities and social sciences.

Old students as well as new have to register and pay the fees before the commencement of each term. The fee for the fourth "class" is 550 Israeli pounds (about £18) a course and it includes books.

A new student may not take more than one course in his first term, so that he can ease himself comfortably into the new method of learning. Thereafter he can take two or more courses at a time until he successfully completes 18, the number required for the Bachelor's degree.

Courses are at three levels—A, B and C, which correspond roughly to the first, second and third years of a three-year university degree course. A student may take not more than six courses at level A and he must take at least three courses at level C.

EU also offers three non-academic programmes: one-year pre-academic courses in English and mathematics; professional courses in electronics and electricity (those who complete the courses successfully receive a diploma, which is recognized by the Ministry of Labour); and adult or continuing education programmes.

Study is mainly by correspondence, supported by television and radio. The university has 29 study centres spread over the country. Almost 300 students in seven teachers' training colleges are taking EU courses.

The percentage of women students in the academic courses increased from 35 in the first "class" to 41 in the third. In the same period, the percentage of students from disadvantaged families fell from 19 to 18.

The bulk of the 3,958 students taking academic courses in the third term are teachers (18.4 per cent), managers (17.9 per cent) and technologists (17 per cent). Nine per cent are in the armed forces, 6 per cent housewives, 4 per cent work in agriculture and 2.2 per cent are in the professions.

Some 3.6 per cent already possess a first academic degree, 1 per cent the second degree and 0.4 per cent a doctorate; 14.9 per cent have teachers' certificates. On the other hand, 6.3 per cent have had no secondary schooling.

About 41 per cent of the students are aged between 25 and 34, 28.7 per cent between 35 and 49, 19 per cent under 25 and 10.7 per cent 50 and above, including 3.2 per cent aged 60 and over.

France

Grande école dispute highlights anxieties over job prospects

from Guy Neave

PARIS

A student strike, the first for eight years, last month brought to a halt the *Ecole des Hautes Etudes Commerciales*, France's top graduate business school.

The strike, called in support of more student participation in course development, was supported by 80 per cent of students.

The confrontation between students and administration came after a refusal by the director, M Christian Vulliez to set up a curriculum development committee composed of students, lecturers and administrative staff. Students, led by the local representatives of the *Union des Grandes Ecoles*, had demanded that the committee have binding decision-making powers.

Student participation in the *grandes écoles* is a particularly delicate matter. While the right of participation has been recognized in the university sector by the 1968 guideline law on higher education, it does not extend to the *grandes écoles*, many of which are privately run.

Nor in the past has participation been a particularly burning issue among this student elite. So long as their training in the *grandes écoles* gave them the possibility of moving directly into a top job, the lack of participation was the price one paid.

Plum jobs are now becoming increasingly scarce, however, and the number of job hunters with impeccable qualifications from the *grandes écoles* fill the columns of major newspapers such as *Le Monde*.

Faced with this situation, many of the *grandes écoles* have responded by tightening up their syllabuses and increasing the work load. Courses previously optional are becoming compulsory. And those that were given comparatively little weight in the final assessment now take on an added significance. Added together, these changes point to the introduction of a new kind of selection or weeding out of candidates during the course.

To many students this appears intolerable. The *grandes écoles* are notorious for their selection procedures. In 1977, for instance, there were 2,979 applicants to the *Ecole des Hautes Etudes Commerciales*. Only 250 were admitted, all of whom had attended "super sixth forms" (*classes préparatoires*); over half had spent two to three years after passing the *baccalauréat* preparing for the competitive entry examination.

While the strike itself may not be particularly long or serious, it is symptomatic of the growing malaise among the country's would-be future young executives.

Republic of Ireland

Budget heralds big rise in capital expenditure

from Paul McGill

DUBLIN

Higher education had mixed fortunes in last week's budget in the Republic of Ireland. Recurrent expenditure this year is a rise less than the rate of inflation, but capital spending got a big boost, partly in a bid by the government to create more jobs in construction and other industries.

According to the Estimates for the Public Service the allocation to the Department of Education went up by 14.3 per cent to £348m. But since government spending generally increased even more, education's share of the budget fell from 16.9 per cent to 16.4 per cent.

The higher education vote went up to £38.5m, but many items in the other education votes—such as student grants and funds for regional technical colleges and training colleges—can also be attributed to third level; in addition, the Department of Agriculture has been allocated a substantial sum for university buildings.

Taking all these together, the higher education allocation for 1978 works out at just over £62m, a rise of 17.6 per cent on last year's £53m. However, this healthy increase disguises the fact that recurrent spending is only 8.5 per cent up.

Worst hit is the teacher training sector. The combined recurrent estimate for the general colleges of education, Thomond College of Physical Education and the training of vocational teachers, has been raised only 4.1 per cent to £4.7m. Indeed, vocational teacher training has been given less this year than last.

The universities and other colleges which get their funds from the Higher Education Authority (HEA) are only slightly better off with their rise of 5.4 per cent for running costs—only half the inflation rate over the last year. The Union of Students in Ireland has warned that these colleges will be looking for massive fee increases to make up the deficit which their allocation of £28.9m is likely to entail.

The nine regional technical colleges—the fastest-growing sector of Irish higher education—have fared better. The recurrent grant is up 18.3 per cent to £7.4m, but it is not yet known how big the increase per student is. In the latest year for which figures are available, the enrolment rose by almost 9 per cent.

The only other large item in the recurrent budget is grants, loans and scholarships to students, which are 23.9 per cent higher than last year, making £3.7m altogether. This, however, will not allow for any more students to get grants beyond the 30 per cent who currently receive them.

The good news of the budget is that capital spending on higher education is going up from ... to £15.9m, a rise of 53.5 per cent. But a government report on the public capital programme published just before the budget suggests that this should be treated with caution, because a big part of the estimate means little progress is made on the sites.

The document shows that a great deal of the 1977 estimate remained unused at the end of the year; almost £2.3m of the higher education estimate was returned to the Exchequer, including almost all that was voted for regional technical colleges, over £500,000 for university structure buildings and just under £500,000 for colleges of education. By contrast, the HEA did well with its finance, spending almost ... per cent of its allocation.

This year, if the full estimate is taken up, the HEA will spend ... mostly on the universities, but the new National Institute for Higher Education, Dublin, has a commerce building at a cost this year, of £150,000. The Department of Agriculture will spend ... a faculty of general agriculture at University College, Dublin, and a faculty of dairy and food science in Cork.

Work will continue on extensions to the regional technical colleges though the amount voted is down by £250,000 on the amount spent in 1977. Big extensions are planned for the three general colleges of education and a new college is to be built in ... Money has also been allocated to begin the long-delayed dental hospital in Cork.

All of these projects have been announced, so it is clear the government has not yet made a decision on the expansion of higher education. Last year the HEA estimated that merely to bring Ireland's third-level participation rate to something like the European average would need between 70,000 and 90,000 places compared with 33,000 at present.

Rough estimates put the cost of an arts place at around £... while that of an engineering place is 10 times higher. Since arts studies are out of favour in current thinking, it is likely that expansion will be in the technological sector; an average of £5,000 per place could therefore be used as a crude measure of cost.

Using this yardstick, it would cost £285m to provide 90,000 places. If they were built over five or ten years, as the HEA has suggested, the annual cost would be between £28.5m and £57m. Beside these figures, the record 1978 allocation of £16m looks paltry.

West Germany

Radicals 'do not necessarily benefit from low polls'

by Günther Kloss

In the elections to student parliaments at West German universities no consistent relationship can be detected between the size of the "silent majority", the number of students not bothering to vote, and the success of radical groups. This is one of the findings of an analysis of election results at 51 universities, technical universities, comprehensive universities and medical academies covering the period 1972-77. The figures were compiled by the West German Rectors' Conference.

Although the percentage of votes cast showed considerable variations from one election to the next and between institutions, some institutions with a high turnout ended up with a very left-wing student parliament (for example, the Lübeck medical academy in 1976 and 1977), while others (for example, the veterinary medical academy at Hanover) had a moderate majority.

The highest number of students voting was usually found to be in the smaller institutions but rarely exceeded 60 per cent. The average vote was between 30 and 40 per cent.

Thus in Konstanz, although the percentage of votes cast seesawed between 50 and 30, the distribution of seats between the liberal right-wing (in student political terms) groups on the one hand and the left and radical left on the other did not vary substantially.

Such a longer lasting constellation, whether moderate or extremist, in turn tends to attract university teachers and students holding similar political views and to repel others.

The study also makes clear that some student groups—especially the moderate German Student Union-Social Liberal University Association (DSU-SLH), the right-wing Socialist University Federation (SHB) and the Marxist Spartakus—regularly poll between 5 and 10 per cent of the vote.

On the other hand, both the Christian Democratic Student Association (RCDS) and especially the newcomer, the Young Socialists (Jusos), have climbed steadily since 1972 with a slight dip since 1975, reaching 17 per cent and 19 per cent respectively last summer.

The analysis confirms the trend variously observed according to which the radical groups to the left of the Jusos have lost some influence since 1972-73. Their share of votes has dropped from almost 42 per cent to a bare one-third.

Denmark

Tenure bottlenecks keep researchers waiting

from Colin Narbrough

COPENHAGEN

Unless a solution is found soon, the "hump" of people between 30 and 40 with tenure in research posts in Denmark could endanger the country's international research standing. That is the conclusion of recent meetings between the Parliamentary Research Committee and a special working group set up under the committee, which included representatives of the six state scientific research boards.

Scientists in the age group 30-35 are well on the way to occupying all available research jobs and blocking the inflow of new and younger talent, possibly for the next generation. Retiring age in Denmark is a high 67.

The State Planning Board for Research, which coordinates the work of the six scientific research boards, has now been given the task of drawing up concrete proposals on how to ease the bottleneck.

At present, 55 per cent of university research posts are currently held by people under 40. Of this figure, 25 per cent are between 30 and 35.

Suggestions to improve the situation have included more sabbaticals (on half pay) for established research staff while young scientists stand in for them supported by temporary grants.

Awarding research posts for a fixed number of years, as opposed to the almost universal principle of tenure, has also been aired.

Don's diary

Monday

"Lower the reading level of the basic texts. That's the message we get from professors, especially in the smaller colleges. So we put out introductory books in ethics and logic and do big promotion jobs on them. There's no market for anything else. Of course you don't have the reading problem in England", said Rhona Robbin, a slim and pretty editor for McGraw-Hill.

We were sitting in the bar of the Washington Sheraton at the annual meeting of the American Philosophical Association. In the lobby, neat, conservatively dressed Ivy League products waited between interviews, each looking earnest with his curriculum vitae and samples of written work.

"We select undergraduates a little more rigorously," I said. "But the universities vary so much more in quality here. We've nothing as bad as some of the state universities, let alone the two-year colleges. But we've no graduate schools to compare with Harvard and Princeton."

"What about Oxford and Cambridge?" she asked.

"Well, they've got about 70 philosophers at Oxford but there's a lot of dead wood," I said. "Most people in the profession think that the East Coast is the centre of things. Besides, you have the money. And our graduate programmes are so amateurish. Thank God."

"How do you like the circus?" she asked.

"The APA?" I said". "We've got nothing like it at all. Dozens of papers. Six hundred philosophers chasing after a hundred jobs. But I still think it's easier to get the first job here. Though holding on to it is another matter."

I vacated the bar at two o'clock. My Delaware colleagues were in a top floor suite interviewing candidates for the oriental philosophy slot. I looked in on Professor Picayune from Virginia speaking on separatism in the radical feminist caucus. But there was not a male present and I left, quickly.

Tuesday

Back in Delaware I spend the day marking scripts from the final exam of my logic course. I am struck by the range of abilities. Some students are as bright as you find anywhere. Others would not get into any British university.

To achieve a sizable enrolment many state schools take almost anyone who graduates from high school. Even the private schools have had to lower standards in pursuit of numbers. The scores of high school graduates in the nationwide Scholastic Aptitude Test, which they all take, have been declining for years.

The SAT, and the GRE or the Graduate Record Exam are about as much a part of United States education as are O-levels and A-levels of ours. So it comes as a shock to learn that the Educational Testing Service, which administers them both, is a sixty million dollar private company. It's the American way. Ralph Nader is suing them for being a monopoly.

Distribution is effected by the market. State universities charge about $1,000 a year tuition, sometimes less, for in-state students, and about double for out-of-state students. The private schools can cost up to $6,000. And there aren't enough scholarship to go round.

But I have found there is one reward in teaching massive numbers in one course. You get the bugs out of your teaching. Americans worry far more about the consumer response to their product. And I suspect the average professor is a better teacher than the average British lecturer. They are far ahead of us in using audio-visual effects, in the use of mimeographed notes, and (I am afraid) in self-presentation techniques which come from business effectiveness methods. After all, they evaluate you at the end of the course, and that can affect merit raises and tenure.

Wednesday

Last departmental meeting of the semester. The chairperson opened by asking for progress reports. Some of us had placed articles, some placed reviews, some of us had read papers at faraway places. Best of all, one of us had been attacked in print, twice. The department was being noticed.

Even the journals are ranked. *Philosophical Review* and *The Journal of Philosophy* have the most prestige. After these come *The American Philosophical Quarterly*, *Nous*, and the Reidel journals like *Synthese*. The British journals *Mind* and *Analysis* are now in the second rank, with *Analysis* in particular slipping in the last few years and now felt to be inferior to the United States counterpart *Philosophical Studies*. Worldliness is desirable, and *Philosophy and Public Affairs* is now the leading ethics journal. All this is quite explicit. The department voted on journal rankings a while ago. They are used in the evaluation of peer publications.

The big item on the agenda was th meeting with the five-person Task Force from COPE, the Committee on Programme Evaluation. The chairperson of the task force, a full professor from Lehigh, suggested that the best way to evaluate the department's programme was to draw up a list of comparable schools with master's degree programmes, present their department with samples of our written work, and with our course syllabuses, and get a response.

When the task force had left we decided, after much discussion, to put another plan to them. Why not invite one or two distinguished philosophers to visit the department, talk to us on our home ground, and look into our research efforts? We suggested some names, drew up the proposal, and sent it back to COPE.

End of semester is a busy time, with much evaluating. There is the evaluation of chairperson activities, the two-yearly peer evaluations, and the student evaluation of our courses. Some of this matters. Two people are up for tenure next year.

Thursday

I go to a party for Dupont executives and their wives given by my splendid suburban neighbours from Texas, the Wellses.

No, I say, there aren't any soup queues in Britain. And if we produce shoddy goods it's because of a lack of investment.

Look, I say, we've got a balance of payments surplus as big as Germany's. You import nine million barrels of oil a day and the trade deficit is forty billion dollars a year. There's an energy crisis, and in the house I'm staying in you can't turn the electric water heater off. That's the world's problem. And you can't do anything about it.

You're right of course, she says, but just what is philosophy anyway?

Friday

"Suppose you were chairperson and you had someone who wouldn't knuckle under, how would you handle it?" I asked.

Sweating in the locker-room Professor Stalker said, "If they published a lot I'd leave them alone. But if they didn't publish a thing, and it seemed they weren't incompetent or mentally deficient, the first thing you do is bring them in and ask them to list the titles of all the drafts of papers they had done in the last five years. These are tenured people so they've been around. If they can't list anything you've got a big problem."

"And if they can list something?"

"Then the next thing you do is ask them to give the secretary those drafts by tomorrow morning, so that you can go over them and see if there's any reason they don't publish. Other than they're waiting for the perfect paper, or they just can't write English. And if it's just a matter of their being real naive about publishing, you assign someone in the department to be their coach."

I burst out laughing. "You mean get a colleague to show them how to write papers?"

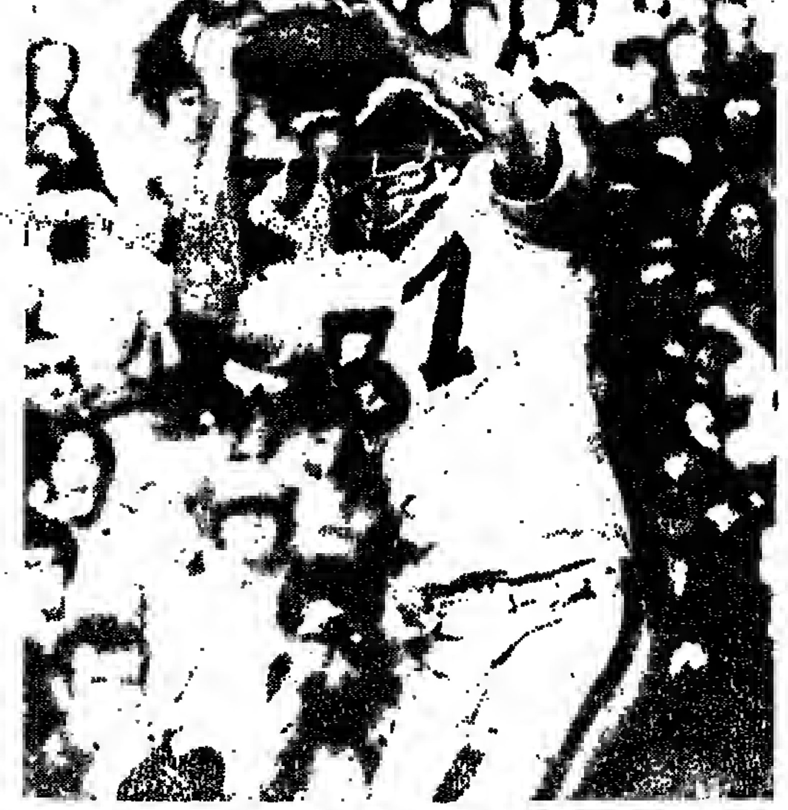
"Sure. Now if they don't have anything to bring in you ask them why. And if they fight you, you ask them what other area of the department could they shine in? So you could think 'Gee, you're making a contribution even though you don't publish. If they can say 'My intro section draws two hundred. Everybody else's draws twenty, or if they can say 'Look, I do one hundred per cent of the committee work of the department', they've got a good case. But if they just say 'Tough beans, I'm tenured' well then you can just make life unpleasant for them. You can give them an eight o'clock class with next class at four in the afternoon. You can make them teach courses they don't like. You can see how much merit you can work into their raise. You can become deaf to the person at faculty meetings'

I laughed again. "Look, don't you think all this emphasis on publication is absurd, Doug?"

"Well, philosophy isn't a spectator sport," he said. "You've got to get off the bench and into the game. The problem is: once a person is tenured how do you make sure they keep working, doing something? Producing anything? Whether it's memos, or fat books. I used to have your ideas. But that's the old world. This is business."

Peter Gibbins

The author is visiting assistant professor in the University of Delaware, on leave from the University of Hull.



"Philosophy isn't a spectator sport. You've got to get off the bench..."

Five problems of continuing education

Ralf Dahrendorf

There is still no proper name for the idea: continuing education, recurrent education, education for adults or mature students, post-experience education. It would be easy to make fun of every one of these expressions. But the case is clear enough: people's own desires and interests, the need to make changes of occupation in mid-career possible, and the provision of opportunities for voluntary unemployment all converge in the demand for more opportunities for mature students in the system of tertiary education. I do not intend to repeat the arguments here. Instead, I want to list some of the reasons why, despite the weight of the case for continuing education, it is unlikely that major progress will be made in this direction.

First. Many university teachers will say that they prefer mature students to school-leavers. They will refer to the motivation of the mature student, to his or her experience which makes them more attentive and interesting, to the teacher-student community which develops among adults. Yet in fact the style of our universities is such that only school-leavers are really welcome. As usual, it is awkward to generalize. Oxford and Cambridge are more clearly geared to young students than, say, the London School of Economics, let alone Birkbeck College.

But by and large it can be argued that the classroom style of teaching, the definition of the student's role from the organization of the students' union to student participation, and the substantive requirements of teaching are all geared to 18 to 21-year-olds rather than mature people with years of life experience. If anything, this climate has become more entrenched in the period of post-Robbins expansion. Indeed it may be said that the Robbins report had the effect of making mature students rather unwelcome in universities. It became their social purpose to provide places of study for growing proportions of growing age groups passing through the secondary system.

Second, this somewhat intangible factor becomes overtly structural as we turn to the time scales of university training. By and large, university courses are geared to the requirements of the candidate for a BA or BSc or the like who expects to get his degree after three or in some cases four years of study. In a sense, the introduction of the "taught Masters degree" has introduced an element of flexibility, although there are quite a few subjects in which this course is taken as an almost automatic additional year after the Bachelor's degree.

Again, there are exceptions. The London Graduate School of Business for example offers a wide variety of courses lasting from a few weeks to several years. Not surprisingly, they find that there is a great deal of interest in such courses, even a readiness to pay for them. Mature students, more often than not, do not want, or cannot afford, a "normal" three year course. What they want is a more limited period of training, with a diploma or some sort of certificate at the end of it. And as soon as this is mentioned, the total inflexibility of universities becomes evident. Again, the trend is in the opposite direction: to abolish diplomas and other "abnormal" certificates and replace them by normal degrees. Can one wonder that mature students find that difficult?

Thirdly. The system of grants reinforces the attitudes and structures of universities. No doubt, the UGC and the DES would like universities to take in more mature students—for their normal courses. But if a university decided to offer a large number of unorthodox courses, say, from four weeks to six months, for mature students and will its "places" in that way (rather than by taking in the targeted student numbers), both UGC and DES would find it exceedingly difficult to recognize such new departures in the allocation of grants.

I have discussed the levelling effect of the student number currency in my last column; here it is particularly evident. Needless to say, many LEAs follow the standards of other public agencies. Not only do some mature students find it difficult to get support in any case—and notably if they are among the many who started a course earlier in life, gave it up, and want to return ten years later—but it is more than a little doubtful whether many LEAs would be prepared to support students for the kind of course which I have described as unorthodox here.

Fourthly. There is clearly another agent in this picture, the employer. I hope this term does not conjure up some silly picture of a malevolent private employer in anybody's mind; I am in fact thinking of large and often anonymous public or private employers in the first instance. Many of them pay lip service to the need for continuing education; indeed they are liable to be as romantic about the concept as anybody else. Some offer intra-professional courses, including the professions. But when it comes to educational leave, most employers are reluctant and negative. This may seem an irrelevant argument, but it seems to me that under present conditions of unemployment, there is much to be said for re-thinking arrangements of educational leave. Indeed, it seems to me that there is more to be said for this concept than for putting forward the retirement age, which is as likely as not to lose jobs rather than distribute them more widely.

But this may well be a pious wish. Employers are in fact no more imaginative than universities and local authorities. They cannot imagine the kind of fluctuation which a widespread system of educational leave would produce, and they make narrow calculations of cost and benefit which deter those who seek further education even more.

Fifthly, one must not overlook the notions and attitudes of those whom we have in mind, the mature students. They, too, are imbued with a sense of indispensability in their jobs. Much of what I have discussed here is in any case a matter of prevailing attitudes. How could it be that these attitudes do not affect the mature students themselves? They are thinking about their careers. Some people, in particularly vicious bureaucratic environments, are still worried to go on holiday, lest someone else be moved to their desk in their absence; how much more worried would they be to stay away for longer periods! They may consider strictly functional courses, but the less functional education is the more threatened world they feel on their jobs.

And so the circle closes: everybody wants more opportunities for continuing education but everybody also behaves in a way which makes these opportunities unlikely.

The Robbins report was a great and necessary contribution in its time. Expanding educational opportunities was a manifest social need, at any rate in a society which recognizes education as a civil right. If another report was prepared about the application of the same principle to the problems of the post-Robbins era, I for one have little doubt that the place of education in people's lives would be one of its main subjects. But it would be up against built-in rigidities of the present educational system which are not to be underestimated. They illustrate in a particular area the general point that our potential of progress is hindered by ossified social structures.

NOTICE BOARD

Chairs

Dr Paul Ginistier has been appointed to a personal professorship in the department of French at the University of Hull.

Dr B. D. Edwards, director of Chloride Technical Limited and Director of Electric Vehicle Associates-Chloride, Cleveland, Ohio, has been appointed a special professor of the department of electrical and electronic engineering at the University of Hull.

Appointments

Universities

Glasgow
University librarian: Henry Joseph Heaney.

Hull
Readers: W. M. Borland (Hispanic studies); Dr C. D. Collinson (applied mathematics); A. J. Hedges (music); Dr C. Ratledge (biochemistry); Dr R. C. Ward (geography).

Surrey
Visiting reader: Wendy Matthews (home economics).

University College, Buckingham
Lecturers: C. G. Hall, M. Robinson and I. N. Stevens (law); G. E. H. Hughes (English literature); M. J. Ricketts (economics); E. A. Shoesmith (mathematics and social statistics); A. J. Hayter (history); L. D. Johnston (politics).

Warwick
Personal readership: Dr T. O. Hawkes (mathematics); J. A. Goode (English and comparative literary studies); S. D. Anderman (School of law). Honorary professorship: Dr D. C. Ellwood (environment sciences). Professor J. C. Bass (engineering). Lecturers: M. B. Stewart (economics); S. T. Richardson (statistics); Dr M. A. McCrae (biological sciences); M. D. May (computer sciences); P. E. Crouch (engineering); Dr Madilyn M. Fletcher (environmental sciences); Dr C. A. Jones (international studies); P. A. Boynton and J. M. Cottrell (School of Law); B. A. Clarke (organizational behaviour in the School of Industrial and Business Studies).

Forthcoming events

"Counselling in Secondary Education: The Key Issues" is a seminar to be held at Leeds University tomorrow by the Counselling and Careers Development Unit attached to the university's department of psychology and the National Association of Careers and Guidance Teachers. Further details and application forms from Eileen McCube, counselling and careers development unit, department of psychology, Leeds University, Leeds LS2 9JT.

* * *

"Men, Women and Social Security", the Fawcett lecture, by David Donnison, chairman of the Supplementary Benefits Commission, visiting professor at University College and the London School of Economics and Political Science, will be delivered on February 14 at 5.15 pm in Tuke Hall, Bedford College, Regent's Park, London NW1 4NS.

* * *

"Certainty and Purpose", the Stevenson lecture, by Sir Michael Swann, chairman of the British Broadcasting Corporation, will be delivered on February 28 at 5.15 pm in Tuke Hall, Bedford College, Regent's Park, London NW1 4NS.

* * *

The faculty of law of Queen's University, Belfast, is organizing a one-day conference on February 18 to discuss the proposals contained in the Draft Matrimonial Causes (Northern Ireland) Order 1978. The conference will provide a detailed analysis of the draft order in the light of experience of similar legislation in England. Further details from Mr C. H. Malcolm, faculty of law, Queen's University, Belfast.

* * *

"Economic Opportunities for Minorities", by Dipak Nandy, former director of the Runnymede Trust, now a Regional officer of the Equal Opportunities Commission, and "Race and Poverty in the Inner Cities—A condition of England Question", by Stuart Hall, director of the Centre for Cultural Studies, are two lunchtime lectures to be held in the boardroom of the Polytechnic of Central London on February 8 and 22 respectively between 12.30 and 2.30 pm. Details from the Inner City Directorate, Department of the Environment, 2 Marsham Street, London SW1P 3EB.

* * *

"On the Study of Public Policy", an inaugural lecture by William Letwin, professor of political science, will be delivered on February 16 at the London School of Economics. Chairman: Professor R. G. Dahrendorf, director of the school. Admission free without ticket.

* * *

The West Midlands Regional Meeting of the Association for Science Education will be held at Aston University on February 25. Professor R. C. Whitfield will deliver the presidential address on "Research into Science Education: Necessities, Techniques and difficulties". Further details from Tony Greener, Information Officer, University of Aston.

Honorary degrees

Liverpool
LittD: Miss Glenda Jackson, actress; Professor Augustine Parker, professor of Spanish literature, University of Texas; Mr Herbert Reginald Poole, chief executive of Liverpool Council of Social Service; Mr Robert William Burchfield, fellow and tutor in English language, St Peter's College, Oxford; Professor Eric Gardner Turner, professor of papyrology, University College, Oxford.
LLD: Lord Ashby of Brandon, Suffolk, Chancellor of Queen's University, Belfast; Sir Robert Mark, commissioner, Metropolitan Police.
D.Eng.: Sir Harold Montague Finniston, chairman of Sears Engineering.
DDSc: Professor Alan Woodworth Johnson, professor of chemistry and honorary director of the Agricultural Research Council Unit of Invertebrate Chemistry and Physiology, University of Sussex.
DMus: Dr Gerald Ernest Heal Abraham, president of the Royal Musical Association.

Aberdeen
DD: Jaques Ellul, professor of law at Bordeaux University and professor of sociology in the Institute of Political Studies Bordeaux; Mr James Donald Smith, minister and author of the book *And All the Trumpets*.
LLD: Sir Edward Maitland Wright, principal and vice-chancellor of the University 1962-76; Mr Arthur Joseph Brown, professor of economics and pro-vice chancellor in the University of Leeds; Mr Iain Cuthbertson, actor, rector of the university since 1976; Sir Peter Kent, Natural Environment Research Council; Mr Erik Wilhelm Axel Paues, director and head of the International Affairs Section of the Federation of Swedish Industries since 1962.

Grants

Bangor
Physical oceanography—Dr John Simpson, £28,003 from the Natural Environment Research Council, for further studies of ocean fronts in the Irish Sea and other continental shelf areas.

The Queen's, Belfast
Pure and applied physics—£11,130 from the SRC for research on biological applications of photon correlation under the direction of Dr J. C. Earnshaw and Dr M. W. Steer.

Bradford
School of Technological Management—£21,700 jointly from the SRC and the SSRC for research on the commissioning of industrial projects.
Chemical engineering—Professor Wilkinson and Dr M. F. Edwards; £27,264 from the SRC for a study of the design and operation of coating processes.
Civil and structural engineering—Dr T. Harrison; £10,620 from the SRC for research into the application of computer graphics to structural design and research.
Control engineering—Dr C. N. Wormald, Dr N. E. Gough and Dr S. Barnett; £34,580 from the SRC for research into computer-aided identification of analysis of non-linear control systems.
Electrical and electronic engineering—Dr N. J. McEwan; £12,100 from the SRC to assist the study of cross polarization and attenuation on ATS 6 and OTS satellites.
Manufacturing systems engineering and polymer science — Dr H. Wood, Professor J. Parnaby and Dr A. F. Johnson; £23,793 from the SRC for research into the influence of polymer molecular features on the design of processing equipment.
Physical chemistry—Professor M. W. Roberts and Dr R. W. Joyner; £14,600 from the SRC for research into the application of a high pressure electron spectrometer to heterogeneous sis.
Operations management—Kettle; £16,007 from the SSRC out an investigation into policies relative to the return following the disablement.
Research in education—Professor Heard and Dr G. K. Verma; from the Leverhulme Trust of problems of vocational adjustment of Asian immigrants in Britain.

Oxford
Nuffield Department of Clinical Medicine—£41,186 from the MRC for analysis of immunosuppressive haematological toxicity treatment in childhood leukaemia under the direction of Dr J. C. M. Lennan, fellow of Wolfson College, Professor D. J. Weatherall, Magdalen College.

Strathclyde
Psychology—Professor G. R. Ss; £92,866 from the SSRC for studies in socialization in infancy.
Pure & applied chemistry—P. L. Pauson: £21,050 from for three years to study the of organo-transition metal compounds.
Bioengineering unit—Professor J. Paul: £16,349 from the Arthritis and Rheumatism Council for biomechanical and functional assessment of finger thumb joints.
Pharmaceutical technology—N. D. S. Bell: £15,893 from the Scottish Home & Health Department study in preparation of radiopharmaceutical for parental use.
Pure & Applied chemistry—J. N. Sherwood: £11,940 from for research into industrial crystallization of organic and inorganic solids.
Mechanics of materials — Dr J. Tooth: £10,986 from British research into saddle supports for pressure vessels.
Applied geology—Dr A. J. £10,450 from the National Environment Research Council for the research the variation in chemical composition and optical properties of some urgent ferous tetrahedrite.

Recent publications

The National Institute of Adult Education's Calendar of Residential Short Courses for the summer contains details of over 1,500 weekend or week long courses on a variety of subjects ranging from natural history, ballroom dancing to antiques, science and meditation. These courses are held in country houses, national park and field study centres, colleges and universities. Prices start at £8.50 for a weekend with full board and tuition (and from NIAE, 19B De Montfort St, Leicester LE1 7GE, 50p).

Noticeboard is compiled by Patricia Santinelli and Mila Goldie

Open University programmes February 11 to 17

Saturday February 11

BBC 2
7.40 Twentieth-century poetry: Imagery and Imagism (A306; prog 1).
8.05 Technology foundation course: Telephone Models (T100; prog 2).
8.30 Elementary mathematics for science and technology: An introduction (MST281; prog 1).
11.00 The development of instruments and their music: An introduction to the Organ (A304; prog 01).
11.50 Biochemistry and molecular biology: Haemoglobin (S322; prog 1).
12.15 Drama: In Rehearsal—"Miss Julie" (A307; prog 18).

RADIO 3 (VHF)
6.40 The age of revolutions: Political Preconceptions and the History of Revolutions (A202; prog 1).
7.00 Technology foundation course: How to Answer Assignment Questions (T100; prog 5).
7.20 Integration and normed spaces: Completeness (M331; prog 1).
7.40 History of mathematics: Introducing the Course (AM289; prog 1).

RADIO 4 (VHF) (not on North Scottish and Welsh Transmitters)
0.05 Open Forum—1.
0.20 Man's religious quest: Religion as a Universal Phenomenon (AD208; prog 1).
0.40 Renaissance and reformation: The Nature of the Renaissance (A201; prog 1).
10.00 Patterns of inequality: Ideology and Inequality (D302; prog 2).

RADIO 3 (VHF)
00.40* Man's religious quest: Religion as a Universal Phenomenon (AD208; prog 1).

Sunday February 12

BBC 2
7.40 Making sense of society: Unemployment (D101; prog 1).
8.05 Science foundation course: Origins, Scales and Limitations (S100; prog 1).
8.30 Mathematics foundation course: Symbols, Equations and the Computer (M101; prog 1).
8.55 Man-made futures: design and technology: Ways of Seeing the Future (T262; prog 1).
9.20 Systems management: Basic Systems Concepts (T243; prog 1).
9.45 Elementary mathematics for science and technology: Mapping and Functions (MST281; prog 1).
10.10 Topics in pure mathematics: The Scene is Set (M202; prog 1).
10.35 Regional analysis and development: Dynamics of an Affluent Region (D342; prog 1).
11.00* The Pre-School Child: Going Shopping (P912; prog 3).
11.25 Open Forum—27.
11.50 Computing and computers: Projects Mean People (PM951; prog 1).
12.15 The sociological perspective: An Introduction (D283; prog 1).
12.40 Problems of philosophy: Is Mind Identical with Brain? (A303; prog 1).
13.05 Statistics: an interdisciplinary approach: Setting Things Up (MDT241; prog 1).
13.30 Microeconomics: Interdependence: Oil and Aberdeen (D222; prog 1).

RADIO 3 (VHF)
6.40* Renaissance and reformation: The Nature of the Renaissance (A201; prog 1).
7.00 Making sense of society: Measuring Unemployment (D101; prog 1).
7.20 Science foundation course: Puzzles, Problems and Enigmas (S100; prog 1).
7.45* Open Forum—1.

RADIO 4 (VHF)
9.10 Great Britain 1750-1950: sources and historiography: The Three Thomas and the Topic (A401; prog 1).
9.30 International politics and foreign policy: The Press and International Affairs (D332; prog 4).
9.50 Problems of philosophy: Body and Mind: A Dialogue from Malebranche (A303; prog 1).
10.10* The First Years of Life: Baby Talk (P911; prog 3).

Monday February 13

BBC 1
7.05 Personality and learning: Helping 1W (E201; prog 1).

BBC 2
7.30* Computing and computers: Projects Mean People (PM951; prog 1).
16.55* Twentieth century poetry: Imagery and Imagism (A306; prog 1).
17.20* Fundamentals of human geography: Out of the Wilderness (D204; prog 1).
17.45 Linear Mathematics: What is Dimension? (M201; prog 1).
18.10* Mathematics foundation course: Symbols, Equations and the Computer (M101; prog 1).
18.35* Technology foundation course: Telephone Models (T100; prog 2).

RADIO 3 (VHF)
6.20 Images and information: Introduction to Imaging (ST291; prog 1).
6.40* Man's religious quest: Religion as a Universal Phenomenon (AD208; prog 1).
17.45 Regional analysis and development: Measuring Regional Imbalance (D342; prog 1).
18.05 National income and economic policy: The Keynesian Revolution (D282; prog 1).
18.20 Linear mathematics: Introduction (M201; prog 1).
18.45 Introduction to engineering mechanics: Using Calculus (T231; prog 1).
19.05 O.U. Announcements/Music Fill.
19.10* Making sense of society: Measuring Unemployment (D101; prog 1).

Tuesday February 14

BBC 1
6.40* Electromagnetics and electronics: Electrons in Motion (TS282; prog 1).
7.05 Social psychology: Psychosexual Differences: 1 (D305; prog 1).
7.30 Solids, liquids and gases: An Introduction (ST285; prog 0).

BBC 2
7.05 Biological bases of behaviour: The Structure and Function of the Brain—1 (SDT286; prog 1).
7.30 Integration and normed spaces: Lebesgue Integration (M331; prog 1).
17.20 Patterns of inequality: A Woman's Work (D302; prog 1).
18.10 Renaissance and reformation: An Introduction (A201; prog 1).
18.35* Science foundation course: Origins, Scales and Limitations (S100; prog 1).

RADIO 3 (VHF)
6.20 Biochemistry and molecular biology: Biochemists and Biochemistry (S322; prog 1).
6.40 The nineteenth-century novel and its legacy: Before Jane Austen (A302; prog 1).
17.45 History of architecture and design 1890-1939: What is Design? (A305; prog 1).
18.05 Fundamentals of human geography: Dartmoor: Recreation and Farming (D204; prog 1).
18.25 Art and environment: The Kitchen Oldo Teabowl (TAD292; prog 1).
18.45 Elementary mathematics for science and technology: Introducing the Course (MST281; prog 1).
19.05 Supplementary to A101.
19.10 Arts foundation course: The Basis of Western Society (A100; prog 1).

RADIO 3 (VHF) (Alternate broadcasts for North Scottish and Welsh Transmitters)
00.20* Renaissance and reformation: The Nature of the Renaissance (A201; prog 1).

Wednesday February 15

BBC 1
6.40 Reading development: Beginning Reading (PE231; prog 1).
7.05* Linear mathematics: What is Dimension? (M201; prog 1).
7.30 Technology for teachers: Case Study: Project Method (PET271; prog 1).

BBC 2
6.40 An introduction to materials: X-ray Diffraction (TS251; prog 1).
7.05 Physiology of cells and organisms: Cells and Their Ultrastructure (S321; prog 1).
7.30 History of architecture and design 1890-1939: An Architect at Work (A305; prog 1).
16.50* Drama: In Rehearsal—"Miss Julie" (A307; prog 18).
17.45* Solids, liquids and gases: An Introduction (ST285; prog 0).
18.10* Personality and learning: Helping 1W (E201; prog 1).
18.35 Arts foundation course: Introduction to the Humanities (A101; prog 1).

RADIO 3 (VHF)
6.10* History of architecture and design 1890-1939: What is Design? (A305; prog 1).
6.30* Drama: "Silence" (A307; prog 1).
17.45 Urban Development: Introduction (DT201; prog 1).
18.05 Methods of educational enquiry: an empirical approach: No Study is Perfect (E341; prog 1).
18.25 Mechanics and applied calculus: Introduction (MST282; prog 1).
18.45 Comparative physiology: Basic Neurophysiology (S322; prog 1).
19.05 O.U. Announcements/Music Fill.
19.10 Mathematics foundation course: Puzzles, Problems and Enigmas (M101; prog 1).

RADIO 3 (VHF) (Alternative broadcasts for North Scottish and Welsh Transmitters)
24.00 Images and information: Introduction to Imaging (ST291; prog 1).
00.20 O.U. Announcements/Music Fill.
00.40* Patterns of inequality: What is Inequality? (D302; prog 1).

Thursday February 16

BBC 1
6.40 Introduction to Education (E200).
7.05 An introduction to the chemistry of carbon compounds: Spectroscopic Methods of Structure Determination (S24-; prog 1).
7.30 Oceanography: An Introduction (S334; prog 0).

BBC 2
17.20 Technology for teachers: Case Study: Project Method (PET271; prog 1).
17.45* Reading development: Beginning Reading (PE231; prog 1).
18.10* The First Years of Life: Clash 1 (P911; prog 4).
18.35* Making sense of society: Unemployment (D101; prog 1).

RADIO 3 (VHF)
5.20 Mass communication and society: Perceptions and Realities (DE353; prog 1).
5.40 Personality and learning: Teacher's Ideas about Personality and Learning (E201; prog 1).
17.45* Integration and normed spaces: Completeness (M331; prog 1).
19.05 Modern art from 1848 to the present: styles and social forms: Theories of Art: 1 Plato (A351; prog 1).
18.05 An introduction to materials: Introduction (TS251; prog 1).
18.45 O.U. Announcements/Music Fill.
18.50 Supplementary to A101.
19.10* Technology foundation course: How to Answer Assignment Questions (T100; prog 5).

RADIO 3 (VHF)
24.00* The nineteenth-century novel and its legacy: Before Jane Austen (A302; prog 1).
00.20 O.U. Announcements/Music Fill.
00.40* Open Forum—1.

Friday February 17

BBC 1
6.40* The development of instruments and their music: An Introduction to the Organ (A304; prog 01).
7.30* Biochemistry and molecular biology: Haemoglobin (S322; prog 1).

BBC 2
6.40* Renaissance and reformation: Introduction (A201; prog 1).
7.05* Patterns of inequality: A Woman's Work (D302; prog 1).
16.55* Social psychology: Psychosexual Differences: 1 (D305; prog 1).
17.20* An introduction to the chemistry of carbon compounds: Spectroscopic Methods of Structure Determination (S24-; prog 1).
17.45* An introduction to the Earth: Chemistry and Geology (S266).
18.10* Biological bases of behaviour: The Structure and Function of the Brain—1 (SDT286; prog 1).
18.35* Introduction to Education (E200).

RADIO 3 (VHF)
6.20* Patterns of inequality: Ideology and Inequality (D302; prog 2).
6.40* Fundamentals of human geography: Dartmoor: Recreation and Farming (D204; prog 1).
17.45* The age of revolutions: Political Preconceptions and the History of Revolutions (A202; prog 1).
18.05 O.U. Announcements/Music Fill.
18.25 History of architecture and design 1890-1939: The Magazines of the Arts and Crafts Era in the 1890's (A305; prog 2).
18.45* Science foundation course: Puzzles, Problems and Enigmas (S100; prog 1).
19.10* The Pre-School Child: You Too (P912; prog 4).

RADIO 3 (VHF) (Alternative broadcasts for North Scottish and Welsh Transmitters)
24.00 Decision making in British Education Systems: The Way of Decision (E221; prog 1).
00.20 O.U. Announcements/Music Fill.
00.40* Biochemistry and molecular biology: Biochemists and Biochemistry (S322; prog 1).

Sir Toby Weaver talks to Peter Scott about a decade of decision

The prophet who had his way

Sir Toby Weaver : winning the argument

In the 1960s Sir Toby Weaver was a prophet armed. His name will always be linked with the two most important decisions of higher education's most vital decade, the rejection of Robbins and the creation of the polytechnics.

He was a prophet because he had clear—some would say dogmatic—views about the form the expansion of higher education should take which were only imperfectly concealed by the imposed reticence of the Civil Service. He believed that the universities' commitment to scholarship debarred them from becoming the main vehicles of expansion—as Robbins had recommended. Instead he argued for a more accessible and more accountable alternative based on the leading further education colleges.

He was armed because for eleven crucial years he was Deputy Secretary at the Department of Education and Science with responsibility for higher education. From the year before the publication of the Robbins report until the year after Mrs Thatcher's White Paper he was a fixed point in the shifting constellation of policy makers. While six Secretaries of State came and five went he remained. For higher education in a very real sense it was the Weaver decade.

So he won his argument. Mr Anthony Crosland, who became Secretary of State early in 1965, rejected Robbins' view of how higher education should expand—and with it perhaps a whole set of assumptions about the very character of higher education. In place of the gradualist and pragmatic path of development espoused by Robbins (and nearly everyone else in the early 1960s) "Mr Crosland and his associates"—Sir Toby's own phrase—chose a radical and ideological alternative. For that fundamental discontinuity in higher education policy Sir Toby above all the other associates was responsible.

Today Sir Toby is the prophet unarmed. He has not changed his mind. He still believes that the decision to create the polytechnics rather than to expand still further the university sector was entirely correct—indeed that the experience of the past 10 years has confirmed that the decision to adopt the binary policy was right. But the influence that he once wielded at the DES has passed, one suspects, into the hands of those who are less committed to Weaverdom.

Sir Toby's departure point in 1978 remains the same as in 1962 at the start of his period of preeminence at the DES. "Discussion of higher education policy is terribly confused by a failure to distinguish things that although obviously connected are separable. First, there is the function of universities. Secondly, there are the purposes of higher education and people tend to confuse those two things," he said.

He explained: "I think of it like this. Say you represent universities by a circle and higher education be a circle. They don't anything like coincide. They are two intersecting circles. Much of what goes on in universities is not concerned with higher education and much of higher education is done in institutions other than universities. The little moon where they connect is only a small part of it."

One mistaken, but popular, criticism of the binary policy is that because it amounted to a rejection of Robbins it must be anti-university. In fact one of the main results of the policy was to protect the universities from their own ambitions to adopt a more popular role, to preserve a classical and perhaps rather idealistic vision of the university.

So Sir Toby has always been hurt by charges that he is prejudiced against the universities. He said that he wished to be cleared of such charges which had arisen simply because he had pointed out that universities often confused scholarship with education.

He added: "I have always also said that every civilised community must have communities of scholars which are devoted in the classical term to the pursuit of truth. Anyone who read or heard George Steiner's remarkable Bronowski lecture 'Has Truth a Future' must accept that that activity which I call scholarship is an essential one for a civilised society."

In Sir Toby's view the universities' offence has not been to pursue academic excellence but to confuse it with human excellence. They appeared to regard training for the pursuit of scholarship as synonymous with higher education. "While there is a general disparagement of the word 'relevance' in the world of scholarship in one sense the universities are extremely narrowly oriented vocational trainers—the trainers of scholars", he added.

"If I have any pretensions to be an educator I would say that the main purpose of education is not to be defined in terms of academic achievement but much more in terms of personal development", continued Sir Toby. "This kind of notion was common to all those who were concerned in the sixties with the development of higher education on a wider foundation than seemed to be implied by the conventional notion of what higher education is about."

He explained that Mr Crosland and his associates shared a common assumption that was quite different from the one that Lord Robbins had made. They believed that the universities were not "jigged and tooled" to take on this quite different role from their traditional one.

He referred with approval to an article in *The THES* by Lord Ashby in which the latter had quoted a remark by an American educator that "our society is mission-oriented. In society the non-specialist and synthesiser is king. The university by contrast is discipline-oriented. In the university the specialist and analyst is king."

This was the starting point, Sir Toby explained, for a search for a method of developing post-18 educational opportunity other than simply by the expansion of the universities. On this distinction between scholarship, the province of the universities, and education, that of the public sector, was built the binary policy.

"Most of us are not going to be what Steiner calls *homo rogitans*. We are going to be problem solvers—of personal, social, political, or organizational problems. Somehow what one is searching for is a kind of curriculum, choice of subject-matter, methods of teaching which is, I think it has been called, action-oriented centred on the solution of problems—not even with taking a specialized piece of knowledge and saying how can we apply it", he said.

So Mr Crosland and his associates, prominent even preeminent among them Sir Toby, judged that the weight of the cultural and intellectual establishment of the universities in favour of the pursuit of scholarship was such that the universities could not make the radical change that was needed for the kind of expansion of opportunity "to part timers, to sub-degree people and to people not destined to become scholars".

Another criticism of the binary policy is that it was an attempt to impose a rigid blueprint on what had been up to 1965 a rather muddled system of higher education. It, too, Sir Toby vigorously denies.

"I should be frightened of some highly organized central system of post-18 education", he said. "I do not think that any central body can plan the educational life chances of perhaps a million human beings particularly if the content and methods of the education are to be responsive to the needs and wishes of students." Indeed he turns this argument round. He argues that as the universities are less flexible institutions in this respect it is all the more necessary to create a much more flexible "market" system which can at considerably shorter notice respond to changes in student demand.

"To have the whole system planned on a five-year or longer term basis when events in the outside world are moving so quickly and the creation of a central plan is such a formidably complex problem would be fatal", he explained.

"The other thing is that I am sufficient of a democrat—in this country one accepts constitutional anomalies and clearly the UGC is such an anomaly—to believe that no government would place the educational chances of hundreds of thousands of students in the hands of, as a policy-determining body, a group of men and women who have no political accountability to anyone."

The third and perhaps most important criticism of the binary policy is simply that it is not working. Polytechnics and colleges are falling over themselves, so this argument goes, to become as much like universities as possible. Sir Toby does not deny that "academic drift" is taking place but he does regard those who express surprise at this phenomenon as rather naive.

Indeed for Sir Toby "academic drift" merely underlines the need for the binary policy, for an alternative to the universities. "It simply emphasizes the fact that the cultural and intellectual traditions are utterly founded on the confusion between scholarship and education", he said. "In this country we are all conditioned to believe that academic achievement is the measure of an educated man."

For him the remarkable thing was that in spite of the weight of this scholarly tradition there were a number of encouraging signs that "an action-based, student-oriented rather than subject-oriented" education is strengthening its foothold. In particular he mentioned the Open University's ambitious plans for continuing education and the work being done at the school of independent study at the North East London Polytechnic. Indeed he believes that with the growing interest in recurrent education time is on the side of the so-called "alternative philosophy" of higher education.

Other aspects of current policy worry Sir Toby deeply. On the Oakes Committee he simply said that the smoke coming out of Elizabeth House (the DES) did not hearten him. He was also concerned about the results of "diversification" in the former colleges of education. He believed that students, especially girls, received an extremely useful preparation for life in the old training colleges. He was not so sure about the institutes and colleges that had replaced them.

The inevitable comparison among the men who shaped higher education in the 1960s is between Lord Robbins and Sir Toby. Both were influenced by the example of America. Lord Robbins quoted with approval Tawney's comment on returning from America after the war about how impossible it was to overestimate how much America had benefited from the fact that so many of her people had had "at least the smell of a university".

Sir Toby interprets the American experience quite differently. "If we were a rich nation—and this is why I think comparisons with America are off the mark—and we could afford to give everybody a 'liberal education' for three years as a prolongation of their general formation, that's fine. But I do not think we can assume that for decades to come everybody is going to be given that opportunity."

For Lord Robbins, a liberal of a rather old-fashioned variety, America is an enticing "could be". For Sir Toby, it is only a "cannot be". The events of the past 10 years seem to suggest that Weaverism has triumphed over Robbinsism. But has it? And for how long?

Lancaster students fear 'threat to progressive tradition'

Students at Lancaster University met this week to discuss proposals which they believe are a threat to the progressive traditions of their new university. Their general meeting was arranged after the decision of the university senate to authorize the courses committee to approve a limited number of more specialized part II degree courses.

The decision has caused a debate among staff and students. Are the proposals an attempt to put the clock back and to return to the traditional pattern of university education which the new universities were set up to challenge? The students believe that they are.

The university, on the other hand, emphasizes that the proposals have a long way to go before they become official policy and says that, in any case, they represent a minor change not a major shift in the approach to degree courses.

The thrust for change has come from the history department. Their scheme would leave the present first year of the degree course, part I, unchanged. All students entering the history department would take three subjects of equal weight.

The changes would affect only part II. At the moment this has nine units of study. Six of these are in the major subject, two in minor courses and three in a "free ninth unit". This unit may be closely related to the major subject or it may be in any department.

The new proposals would not change the existing major and minor course structure, but the history department believes they would increase the options for students. Either they could choose to do the present course with its major/minor units or they could choose the new course which allows them to do eight units in history out of nine. Both courses would still include the free ninth unit and the new scheme is not an attempt to have everybody doing history all the time.

Professor H. J. Perkin, its head, points out that even under the existing scheme a student can do seven units of history if he wishes. He suggests that it is important to understand the difference between interdisciplinary and interdepartmental. The additional unit could be in a subject like history of science which, in another university, would be in another department.

He explains the reasons for the proposed changes in this way. "We think there are some students who think that if you go to Lancaster you can't be a real historian because you cannot do enough history. We want to attract the committed historians." He would deny, however, that the scheme involves greater specialization. It simply allows greater flexibility and should help change the idea which people have about history at Lancaster. There is no question of empire-building, he adds. The department will not be allowed any more staff even if it attracts more students. Professor Perkin says that some subjects which would be taught in the history department of other universities, such as political science or ancient history, at Lancaster are taught elsewhere.

Students of all political persuasions at the university take a different view and feeling is especially strong in graduate students who see themselves as upholders of the Lancaster tradition.

Mr Joseph Koydecki, the union's vice-president of academic affairs, says: "We see this as a first move in the direction of the Oxbridge-type system which Lancaster tried to get away from. We believe students should have the option to come to a university which has a cross-fertilization programme."

He says that though the science courses at Lancaster already involve more specialization, this should not happen in the arts. Other departments are known to be considering similar plans. History is being seen as a test case.

Another problem which worries the students is that departments where history students have done their minor courses will suffer if the changes are made. They believe the proposals will do serious damage to departments with fewer resources which are unable to compete alongside "centres of excellence". Professor Perkin, however, says that none of the departments in which minor courses are done would be affected.

Senate accepted that the proposals should be considered but attached a number of conditions. It was anxious that students should not be under pressure to adopt the more specialized course and that account should be taken of the availability of courses taught in other departments which are relevant to the specialized scheme. The scheme now goes before the courses committee and its financial implications have also to be considered.

Judith Judd

South African vice-chancellor for all seasons

Martin Feinstein profiles Professor G. R. Bozzoli who recently retired after nine years heading Witwatersrand University

The vice-chancellor of the University of the Witwatersrand must, of necessity, be a rare combination of peacemaker, beggar, politician and scapegoat.

One reason is that the university (Wits, as South Africans know it) is the country's most politically volatile white university. Its staff and students, forbidden by law to protest openly against apartheid in education, usually make their outspoken opinions widely heard, and the vice-chancellor, answerable to a highly sensitive government, must maintain a difficult balance between the university's dependence on official institutions and its commitment to academic freedom.

Wits is also widely seen as the country's most vibrant academic institution. Its international staff, its situation in Johannesburg and its large research component have combined to produce the astonishing potential for African-oriented teaching and research that is only beginning to be realised there.

Behind the university's growing social and academic links with the huge township of Soweto (reflecting the increasing volume of African-oriented research at Wits) was Professor Guerino Renzo Bozzoli, who retired last month after nine years in office as vice-chancellor.

He has, to use his own words, "seen the university change from grassroots beginnings to a large, sophisticated and controversial institution, praised by many, scorned by many".

Dr Bozzoli's association with the university dates back to 1930, when he enrolled as an engineering student after his matriculation from Pretoria boys high school, after graduating in 1933. A series of promotions in the electrical engineering department led to his appointment in 1948 as the department professor and head. He obtained his DSc the same year.

For the next 11 years, his service on the university council, and for a shorter period as dean of the faculty of engineering, established him as one of the university's most able and popular administrators.

His appointment to the post of deputy vice-chancellor came in 1965, and five years later he became the university's ninth vice-chancellor.

It was then that he set his sights on the three broad goals which have shaped the university's policies until now and are sure to continue doing so for some time. They are the opening of the university to all races, the continuation and intensification of the university's highly selective appointment and admissions policy, and a better balance between teaching and research—particularly in the humanities.

Today he admits that all three have only been partially met—mainly as a result of government intransigence over segregated universities and a continuing austerity programme at Wits.

All three have enjoyed equal priority, but by far the most sensational has been Dr Bozzoli's spearheading of the attempts at breaking down the ethnically exclusive barriers of academic apartheid. Having been declared a "whites only" university by the 1959 Extension of University Education Act, his efforts at opening the university to all races have met with consistent failure. With the exception of government approval for the attendance of Indian students at the university, his persistent representations to the cabinet have met with blunt official refusals.

But the imminent retirement of the Minister of Bantu Education, Mr M. C. Botha, has boosted hopes for the far reaching changes in higher education in the next few years, and Dr Bozzoli predicts a relaxation of academic apartheid.

Mr Botha is the man whose unyielding refusal to separate education and apartheid has posed the greatest stumbling block to Dr Bozzoli's open university plan, and his retirement at the end of this month will be anxiously watched by those who will control the university over the next few years, particularly Dr Bozzoli's successor, Professor D. J. du Plessis.

Says Dr Bozzoli: "So many of these rigid policies depend upon an individual, and as I see the situation, the individual who has stuck to them so rigidly is settling. I suspect there will be a change in the admissions situation now."

Professor G. R. Bozzoli: peacemaker, beggar, politician and scapegoat.

Progress towards the other two long-term goals—the continuation of a selective appointments and admissions policy and a better balance between teaching and research—has been slowed down by financial difficulties and worsening foreign relations.

The year 1974 signalled the start of the funding crisis in South African higher education, still reflected at Wits in the austerity programme. Research has been retarded financially (several of the university's 30 research units are down to their core staff, and one has closed down) as well as by staff cutbacks which have forced researchers to spend more time in the lecture theatre.

Nevertheless, says Dr Bozzoli, the university's financial prognosis is good. "Wits does not have an unhappy financial prognosis, mainly because of the preemptive measures we took (including the staff cutbacks which have hit Wits so hard) and we have contained the situation well up till now. Provided these areas are kept in control, the university will be able to weather the storm as its student numbers grow in the years ahead."

The university's worsening relations with some overseas universities—he declined to name them—are beginning to threaten the flow of foreign academics who are in such high demand at Wits. It is clear that much of the university's academic prestige in SA depends on them, and Dr Bozzoli sees the university becoming increasingly dependent on informal, individual contact as international exchange continues to suffer from the isolation brought about by overseas protests against apartheid.

Over 30,000 of the university's staff are foreign ... drawn mainly from Britain, Canada and Australia.

"Informal contact has been maintained, and the individuals with whom we have contact are regarded very highly, but it is awful not to be part of the family", he said referring to the university's exclusion from the Commonwealth universities conference. In other cases of overseas hostility include a ban on academic advertising in the United States and the Open University's refusal to accept South African academics.

If the university's financial prognosis is good, the prospects for physical expansion in Johannesburg under du Plessis are not. ... for the creation of a major ... lite campus" at nearby S... initiated by Dr Bozzoli is ... to be shelved for several ... an "eventual possibility" ... was to enable the university's continued expansion after 19.. critical point in time when ... numbers are expected to reach ... maximum limit for the ... campus.

"Under present economic conditions I could never expect Government to put forward funds for an entirely new ... although they might finance limited expansion of this ..."

From the students—now ... ing over 11,000—has come ... and consistent support for ... and his policies. Dr Bozzoli's ... defence of their right to ... has led him into difficulties ... the Prime Minister (who ... scribes as "exceedingly ... about the things students ... do, taking them far more ... than I believe a man in that ... tion ought to") on their behalf.

"Many of my friends and acquaintances", he says, "... less they happen to be political ... time with what the students ... highly critical of what the stu... do. Some even accuse me of ... sufficient control and discipline and their defence has sometimes given me a hard time."

In a student referendum ... Dr Bozzoli put his open ... policy to the test in a student referendum. Of the 92 per cent ... that came out in support ... said: "It showed that ... the majority are not actively ... volved, they are aware, thinking liberal people."

But this overwhelming ... support is offset by the ... parliament this week: ... that there are many political ... economic obstacles to overcome ... Wits is to one day open its doors ... all on the sole criterion of academic ability. And although Dr Bozzoli's term of office has seen few ... changes in that direction, the ... and determination to ... academic apartheid has been ... stilled. The results should be known.

British engineers fall behind Germans in status and salary

Far reaching changes in the recruitment, training and employment prospects of engineers are crucially important to Britain's economic survival. This is the message of a Southampton University research team which has been studying the role of the mechanical engineer in West Germany.

German engineers earn more, enjoy higher status and look forward to better job prospects than their British counterparts. There is an urgent need to extend the length and broaden the scope of British engineering training; pay top practitioners better; and involve the profession more in industrial management functions.

The team's survey report, *The Recruitment, Deployment and Status of the Mechanical Engineer in the German Federal Republic*, has just been published. The authors of the work, which was commissioned by the Department of Trade, are Professor Stan Hutton and Mr Peter Lawrence of the university's department of mechanical engineering and Professor John Smith of the university's department of sociology and social administration.

The study, which began in April, 1975, is partly based on the results of interviews with 1,000 German mechanical engineers. The authors replicated in Germany, with suitable modifications, a study of British mechanical engineers conducted in the early 1960s by Professor Hutton and a colleague. They urge a word of caution in interpreting some of their comparisons because some of their data derives from the British study conducted in 1962.

In Germany the two main routes to professional engineering qualifications are via the technical universities, Technische Hochschulen, leading to a Dipl.Ing., or via the engineering schools, Fachhochschulen, leading to the Ing. Grad.

The Ing. Grad. course takes about three years and the Dipl.Ing. takes about six years and has a higher status. All Dipl.Ing. students must have done three months industrial training before they enter university and must do another three months during their course. Ing. Grad. students receive practical training during their course but nowadays it is not obligatory for them to serve an industrial apprenticeship.

The authors argue that the German engineer enjoys higher status than his British counterpart because of the quality and duration of his training, his remuneration relative to that of the other middle class occupations, and his access to management positions in German industry. It was further explained in terms of the closer contacts between industry and the institutions in Germany where engineers are trained, the higher status of German industry itself, and the state sponsorship of engineering education.

Other factors included a specialist rather than generalist emphasis in occupational placements and promotion, a general tendency towards materialism and meritocracy in German society, and the engineers pre-eminent role in Germany's post war reconstruction.

The relative absence of a concept of "professions" in Germany, the authors also argued, meant that engineers could not suffer a loss of status through controversy as to whether or not they constitute a profession.

As far as remuneration is concerned German engineers are paid more than their British counterparts. In January, 1976, the Institution of Mechanical Engineers in Britain revealed in a salary survey of its members that the median income for all grades, both graduate and non-graduate was £5,510 per annum.

The average salary for the author's sample of German mechanical engineers was £12,119 per annum. Even given that the cost of living in Germany in 1976 was 36.4 per cent higher than in Britain, the German engineer is better off.

The authors also draw attention to another British study which shows that in Germany the engineer is better paid relatively than other high status occupations, for example, than a senior civil servant or professor. In Germany engineers in industry earn more than engineers in the public sector, whereas the reverse is true in Britain.

The training period for German engineers is longer than for their British counterparts. For the university trained engineer in Germany the formal length of the course is four years plus a sixth months compulsory Praktikum in industry. The average length of the German university course in engineering, however, is 5.8 years.

The length of the British university course is three years and there is no universal requirement for practical training in industry as part of the course. For the non-graduate engineer, the Ing. Grad. in Germany, the comparison is more complicated. The formal course length is three years but the six month praktikum has now been generally abolished except in Bayern and Baden-Wurttemberg.

In Britain there are three approximate equivalents to the German Ing Grad course: parts one, two and three of the Technician Course; ONC-HNC; and OND-HND. The first two are part-time day release courses where the time actually spent in college is substantially less than the three years full-time Ing Grad course. The third, if this is a thick-sandwich course, may also involve three years of college study.

The authors also point out that higher proportions of German engineers: come from middle class homes; attended a selective secondary school; and studied mechanical engineering at college. On the other hand at the time of deciding to become engineers more British students thought of an eventual career in management and while studying took non-technical subjects at college. A higher proportion of British engineers had fathers who were university graduates.

More German engineers had given lectures or papers outside their place of work, published books and articles, and worked in industry.

And they also appear to work longer hours; be slightly more committed to engineering, and enjoy their jobs more than their British equivalents.

In future the authors suggest that university engineering faculties should try and attract a considerably higher proportion of students with very good "A" level passes. The need, they add, is for quality rather than quantity. Nothing that the ratio of qualified engineers to scientists is significantly higher in Germany, they would like to attract some of the people who read science at university to study engineering so as to improve the balance in Britain.

The interests and learning experience of students should be widened by broadening the "A" level curricular. This in turn would mean students spending longer at university to get up to standard in specialist subjects.

The university course in engineering should last four years. This would enable students to reach the required standard in specialist subjects that would put them on a level more comparable with those trained in many European countries. All engineering students, both graduate and non-graduate, ought to spend a year in industry before going to college. With a four-year university course at least the final year should be used to take students nearer to the real workaday world of engineering problems.

The authors also argue that a new, more practical and vocational, course and qualifications should be introduced into Britain similar to the Ing. Grad. with a compulsory requirement of one year in industry prior to admission. They add that it is essential to ensure that the right kind of training courses are also provided for technicians and that the most able people fill them.

As far as engineers employment possibilities are concerned: more responsibility should be given to young engineers; there should be longer technical career ladders for engineers in industry; and engineer's access to management posts should be improved.

"Because we believe a first class industry is vital to the economic survival of Britain, we recommend strong measures to raise the status of industry generally in British society. We believe this would tend to raise the status of engineers as an occupational group and have a desirable effect on occupational recruitment and ultimately on the economy of the country," they say.

"There is, in the two societies a different attitude to efficiency. In Britain it tends to be regarded as something best left to others (management consultants and Americans!); sometimes it is treated almost as a dirty word.

"Being efficient, or more particularly, being seen to be efficient is not part of the British cultural style. In Germany efficiency is regarded as a virtue. This fact is observable, even by the business visitor, in attitudes to work, deadlines, obligations, preparations for meetings, information exchange, and so on.

"We would argue simply that such an attitude were accepted in British industry and the public would be bound to place more value on the part played by engineers. Without top quality engineers and management British industry and Britain will not survive."

Simon Midgley

Alternative route opens for adult students

Maggie Richards reports on an open college approach to part-time courses in the North of England

"Nobody who has done our study techniques course could watch a political party broadcast on television now without curling up with laughter." The speaker is a former lorry driver, now a student enrolled on the country's first "Open College" course, taking part in a discussion on the impact of study on his life.

A woman student adds her contribution: "I worked on a factory line for two years. It was a challenge, because I hated every minute of it. Now I have begun to think—and I have begun to realize I am not as dense as I had imagined." And a former grammar school pupils says: "This course has demonstrated to me how the system failed. It didn't teach me a critical approach. It didn't help me to criticize and to reason—just to write an examination paper."

The three are all members of a new "Open College" course being run at Nelson and Colne College in Lancashire, in conjunction with Lancaster University and Preston Polytechnic.

The course has been devised to offer adults an alternative part-time route into higher education, following a programme of studies more suited to their needs than conventional A levels. But by designing it as a series of subject units at first and second year level the college has aimed to attract other mature students, more interested in selecting a subject for its own sake.

During their first year, students take Stage A units, intended to introduce them to skills, basic concepts and methods of study. The A units consist of 50 hours of tuition, and last up to half a year. Students are expected to complete four before progressing to Stage B.

First year units include Study Techniques and Scientific Method, with introductory programmes on social sciences, politics and economics, music, art, literary forms and the physical sciences. There are introductory units in three languages—German, French and Spanish.

Stage B units, involving 100 hours of tuition, offer European Studies, The Educational Process, Man as an Organism in the Environment, and People in Organizations—as well as modules in mathematics and the physical sciences, history, religious studies, languages and geography.

The Open College has a unique—and as yet untested—link with Lancaster University and Preston Polytechnic. Some students now in their second year will, on completion of six units, including two at Stage B, apply for places in Lancaster, the polytechnic, or four colleges whose degree courses have been validated by the university. Applicants will be assessed partly on their course work. But 50 per cent of the assessment will be made on their performance in a final end-of-course examination.

The course at Nelson and Colne has been administered through its initial two years by a committee comprised of representatives of all the institutions involved and the local education authority. More recently, other colleges in Lancashire and Cumbria have embarked on Open College courses and the committee's membership has been widened to admit their representatives.

The scheme at Nelson and Colne began in April, 1976, but the college had been involved in a form of informal adult education for a number of years. A "second chance" series, run in collaboration with a local newspaper led the college to devise the Open College system—based loosely on the Open University's course unit approach. "Open College" seemed a natural title.

Sir Charles Carter, vice-chancellor of Lancaster University, expressed interest in the proposal, and discussions on establishing a link between the institutions began in earnest in January 1975. Fourteen months later, Nelson and Colne admitted its first intake of 59 students.

There are now 36 tackling Stage B, while about one third of those who have not continued at second year level have chosen Open University courses or other educational programmes instead.

Open College tutorial session

The college has a rolling admissions policy, with entry dates in April, October and January. More than 100 new students enrolled in October, bringing the total to 170.

They come from a variety of backgrounds: many are housewives — women predominate throughout the course, with 95 female enrolments so far, compared to 75 male.

Amongst the employed students, those in technical skilled and semi-skilled jobs dominate, followed by those in clerical posts or undertaking unskilled labour, but there are also teachers, health visitors and managers. The course can also boast a sprinkling of pensioners—including one woman of 78—and several unemployed.

To the organizers at Nelson and Colne, Mr Mike Leese and Mr Derek Crossland, the prominence of mature students from the three largest job categories is one of the most exciting aspects of the college's development. "We appear to be attracting a new type of student, who has not come forward before", explained Mr Crossland.

In part, the reason has been the open access policy. Candidates have to write "half a page of decent English" to be accepted. But the open access policy has been accompanied by a deliberate attempt to attract adults who might otherwise not have considered taking the course—by conducting a marketing campaign in shopping centres and public libraries. During the next few months it is hoped to expand the exercise to involve several large factories in the area.

Coupled with the publicity, the organizers felt it important to adopt a personal approach to prospective students. Each is given an appointment for an individual interview—there are no block-enrolment sessions.

Once embarked on the course, students are encouraged to maintain the personal relationship—either with one of the two course organizers, or with their tutor. Attendance, for between two and a half to three hours a week, is monitored and enquiries made about absences.

Not all of those now in their second year and aiming at admission to university originally began the course with that intention. For some who enrolled to broaden their interests, the course has led to a re-examination of their own capabilities and the realization—often still accompanied by a sense of incredulity—that a university education may be within their grasp.

In the student discussion of the course the former lorry driver says: "I had been out of the classroom for 27 years. I spent 20 years in solitary confinement, sitting alone in my cab doing 100,000 miles a year. In that sort of environment you can only deal with basics. Life is a struggle, and you have to clear all the extraneous thinking out of your mind if you are to survive.

"I have decided to initiate changes in my life—to go to university. But I realise that before going to university I have to get them to accept me—and more important, to get them to accept that I am capable of receiving instruction."

Other students report their studies have had an impact on their own attitudes to education, and this in turn has affected the outlook of their children. "My children are proud of me. It makes them think about their education and their future", said one housewife.

Several had more personal objectives in enrolling. A pensioner and former trade union official reports: "I had retired, and I suddenly realised that it was the end of my career. I decided it was time to change my outlook entirely. The course has been most interesting for me, now I am hoping to go on to university."

Since the inception of the course at Nelson and Colne four other colleges—West Cumbria, Accrington and Rossendale, Lancaster College of Adult Education, and Morecambe College of Further Education—have joined the scheme and are teaching Stage A units.

Last month the scheme took another step forward with the creation of the Open College Federation of the North West, which will enable staff in all five colleges to participate in the development of new units, and the revision of existing ones.

The federation has already attracted the attention of other colleges in the north-west, which have expressed interest in joining the group.

A further expansion of the scheme is likely in the near future. The National Extension College at Cambridge is planning the production of two Stage A units, Study Techniques and Scientific Methods, in correspondence course form. If this pilot project is successful, other units may be presented in correspondence form—though completion will not entitle students to make application for places at Lancaster.

Happy to work in interesting times

David Butler's appetite for elections is undiminished. Mike Duckenfield reports

In a sense, David Butler has been involved in politics all his life. He was born on the ninth day of the 1924 general election campaign—the third in which his grandfather, Albert Pollard, a history don, contested the now abolished parliamentary seat for London University as a Liberal.

For all that, Dr Butler's background is totally academic and largely non-partisan. His father was a professor of Latin at University College London, and his wife is a fellow of St Hugh's. He was brought up in Bloomsbury and went to St Paul's School and New College, where his father had also been a professor.

At New College, he took an abbreviated form of PPE. Sir Isaiah Berlin, his tutor, he says, thought him "the most unphilosophical pupil he had ever encountered and said it was a great triumph of teaching to show me how I could take Schools without including any philosophy papers."

After two years in the Army he returned to finish his degree in 1945, and by chance got involved in the first Nuffield election study. He had been turning the election results into percentage form—a thing not normally done at that time—when his economics tutor told him about a projected book.

"So I went along to see the author, R. B. McCallum. He was totally innumerate and asked me rather like a *bourgeoise gentilhomme* asking for books for his library, 'Oh, we'd like to have some statistics for the book. Can you provide some?'. So I produced some tables for him."

Dr Butler's two appendices to the book, one relating the number of seats to the number of votes, were a turning point. He gave up the idea of a career in economics and successfully applied for a scholarship to Princeton University, the American home of opinion polling. When he returned to Nuffield he took his DPhil and was asked to stay on as a research fellow and write the 1951 election study, the first of his eight. He became a permanent fellow in 1954.

The 1945 study also led, indirectly, to broadcasting. Towards the end of the first Attlee government the BBC decided to overturn tradition by covering the election results and McCallum was asked if he would provide comment. He agreed on condition Dr Butler could help him with the statistics. He has been a regular election panel member ever since.

Coverage now lasts for an almost unbroken 24 hours and involves continuous scrutiny of a phalanx of five monitor screens. Nevertheless, Butler finds the job too stimulating to allow tiredness though, since 1970, he has had the help of a computer to work out trends and the swing between parties. Before a dozen backroom boys had to be armed with slide-rules.

The computer, however, nearly got off to a bad start. "In 1970 we were lucky because the first few results showed a larger than average swing to the Conservatives and our predictions from the start were for Labour to lose. If the early results had been normal for the night, we might have said Labour would just hold on."

Though a tele-don of long standing Dr Butler has managed to avoid becoming a television personality. Broadcasting, however, only takes a few days a year. One day a week he spends on administration and work in college, another is spent teaching and supervising students. He runs one course of lectures and a weekly seminar, to which he attracts many leading politicians to open the discussion.

Much work is done at home and he is currently involved in three books; one on coalitions to which he is a joint contributor with Robert Blake, Kenneth Morgan, David Morgand and A. J. P. Taylor; a second on referenda in democratic countries; and the third is a fifth revised edition of British Political Facts, the reference work he first wrote with Jennie Freeman in the late-1950s.

Despite his statistical work for the 1945 study, Butler is not "a quantitative person". "I was born a little too early to be computerized. I'm almost a fraud because, though I'm numerate, I'm not a statistician or mathematician."

He is essentially a ferreter after facts and virtually all his books can be used as reference works, including the election studies, which aim to record events and provide a document setting out for the convenience of future historians the publicly available information about elections.

The structure of the studies has remained much the same since their inception; they are of necessity shaped by the dramatic unity of telling a story. As the introduction to the 1970 volume put it, in the style of a Victorian novel chapter-heading: "to see why Labour went into the depths of public disfavour; to show how it recovered; and then to examine the way in which the Conservatives won after all."

However, emphases have changed, partly due to the contributions of co-authors during the past 20 years, Richard Rose in 1959, Antony King in 1964 and 1966, Michael Pinto Duschinsky in 1970 and Dennis Kavanagh for both 1974 elections.

Initially, the run-up to elections was kept brief in the belief that voters at election-time were like juries, making up their minds on the evidence at the time. With research to prove the opposite—that very few voters change allegiance even over long periods—background become more vital to the studies.

Since 1970, however, the circle has become complete. The last-minute swing away from Labour in 1970 and the snap poll in February, 1974, showed a new volatility in voting habits. Another change has been the extension of inquiry to behind closed doors. In recent elections Dr Butler has carried out extensive interviewing of politicians and the draft manuscript of the book is often checked with them before it goes to press. The studies also have more statistical data analysing the outcome.

After polling it is simply "six to seven months' hard labour". Even so, Dr Butler calculates he has only spent five of the past 25 years on the studies compared with the 12 years between starting work with Professor Donald Stokes of Michigan University on their longitudinal surveys of voting habits and the publication of the second edition of the resulting book *Political Change in Britain*.

Much the biggest impact intellectually on him during the past decade, apart from his work with Stokes, has been Australia. He first went there in 1967, and has returned to the Australian National University, a Canberra-based research institute, for every general election since.

It is not only that governmental comparisons are more fruitful between Britain and Australia than with the United States, but the experience of the 1975 crisis which led to the downfall of Prime Minister Gough Whitlam. He is now prepared to "think the unthinkable", when the usual rules do not apply, and is looking again at the latent forces in British politics.

"I used to wonder if I would be bored or run out of ideas as I went into my fifties, but at the moment I feel very much the opposite. My subject has become so much more interesting. One can be a little unhappy about this as a patriot; one doesn't like one's country to be too interesting. But, it's like the lovely Chinese curse—'May you live in interesting times'".

Glorious job prospects in land of rising sun

Japanese universities have until recently tended to be rather inaccessible to European visitors because of their distance and the barriers set up by language and culture. When I visited 22 university placement offices and a similar number of employers last summer, I felt I was the first in the field in show an interest in what may be termed the vocational consequences of being a university student in Japan. There really are some startling differences between our two countries in attitudes towards education and employment.

At Tokyo University, the apex of the Japanese higher education pyramid, they do not have to exert themselves to market their graduates. Any Tokyo graduate who wants to can enter interesting, secure, well-paid employment of his own choice. They really have no exact counterpart in Britain, resembling more the graduates of the French *Grandes Ecoles* in their attractiveness to potential employers.

So much prestige do the top Japanese universities confer that gaining admittance is more important than subsequent performance. The other older state universities (the national system now providing only about 20 per cent of the total output of graduates in any one year) are in a similarly enviable position: Tokyo Technical University had 240 engineering and science graduates entering employment, for whose abilities 2,400 employers were competing; and Kyoto divides with Tokyo the privilege of providing successful candidates for the top government jobs.

On the other hand there was no complacency in private universities, go-getting examples of private academic enterprise based on the American model. Even the top ranking colleges like Keio and Waseda, and the Jesuit Sophia University show a lively recognition of the connexion between healthy enrolment figures and good jobs. Some of the lower ranking colleges had stepped up their public relations efforts to almost desperate lengths, dispatching teams of professors and placement office staff on marketing exercises during the vacation to employers and parents all over Japan.

The private institutes were much better provided with facilities although many universities in Tokyo were intolerably over-crowded. Chuo founded as "The English Law School", with about 7,000 graduating annually had to put up with one large room in which all their careers staff conducted their work, including individual interviews with students in three cubicles. However, they are planning to move out soon to a new campus in the country.

But despite these cramped conditions student enrolment in metropolitan universities is not a problem since the mere fact of being a graduate from a college in the Tokyo area helps to get a job, and I was told that only about 10 per cent of the 423 universities providing four year course have difficulty in attracting students. It is likely they are the smaller provincial colleges with less than 1,000 students.

Japanese universities, apart from being much more numerous, span a much wider size range than our own, with a tail of smaller universities while at the other end 41, accounting for about half the output of graduates, have an enrolment of 10,000 or more, with one huge university of 30,000 students.

So many institutions of higher education, nearly 1,000 if those offering two year degree courses are included, must inevitably vary in quality. Some are indeed jokingly referred to as *ekiben daigaku* or places to go and pick up a degree in. The poorer ones are overcrowded, producing rather meagre intellectual fare in the traditional Japanese disciplines of law, economics and commerce and the standards demanded are not very high, since no formal proof of satisfactory completion of studies are demanded, still less classified degree results, and students may take up to eight years to graduate.

Science education is rudimentary and not entirely absent in them and they have tiny postgraduate enrolments proportionate to their size. By contrast, the national universities have highly qualified staff, good staff-student ratios and good laboratory and other facilities. On average the quality of British universities is certainly higher, but the Japanese have so far made expansion of numbers a priority.

Quality at the top end of the spectrum is ensured by the simple device of subjecting the universities to a process of natural selection, by which the weakest go under. A place in this pecking order is determined partly by the institution's history and partly by the difficulty of its admission exams. These are meticulously analysed annually and the results published so that each institution knows how it stands in regard to the others.

In any case the quality of education matters rather little, first, because students are not assessed publicly in finals (although elaborate records are kept of academic performance); second, because what really matters is the standing of the whole institution rather than that of any individual department; and finally, because universities possibly really do act, in Professor R. P. Dore's words "as an enormously elaborated, highly expensive ability testing system with some educational spin-off".

The grading function, for the benefit of employers (or the state) appears to be paramount. The university hierarchy and the parallel ranking of employers appear to have been designed primarily as devices for the assessment of potential recruits for industry and government.

Behind the recruitment process lies a vast "old boy" network of connexions between companies and universities, and a brand of elitism is frankly practised. First class companies will only recruit from first class universities. Recently, restrictive practices of this sort have come in for increasing criticism from the press, who claim that the lesser universities should have the opportunity to put forward good candidates for good jobs, and Tokyo University is regularly attacked for cornering the good jobs, but such is the conservatism of the system that reform appears to be difficult.

A leading trading company that I visited told me with pride that they had taken 56 graduates that year from one top private university (Keio) alone! Similarly, Waseda, which is large and powerful, appears to get large numbers of its graduates into the press, and media. The use of connexions is practised on such a large scale, and so systematically, that our own parallels with Oxbridge recruitment into the Civil Service look modest by comparison.

Another force for conservatism is the widespread custom among Japanese employers, of appointing a graduate for life at the age of 21. So the final year student's round of interviews may be his first as well as his last. There is little mobility among experienced people. One consequence is that firms train their own personnel very carefully, since an employee will be with them until retirement. Another is that the student job-seeker will place a high value on a company's financial stability, since it could be a personal tragedy to lose a job, say in middle age, through a company's financial failure.

Japanese students, like our own, regard sailing as a second-choice occupation but their career is additionally perilous for them because of the inherent insecurity of the job where earnings are related directly to performance.

Japanese higher education is impressive. Rationally designed, and indeed much more modern than our own since it was completely reshaped just after the last war, it represents the logical development of efforts to provide the state with skilled manpower, graded in quality and guaranteed as to ability and motivation.

The implications of such a system when nearly half the population entering employment will have degrees (predicted for 1985) are staggering, for Japan will then be producing the most highly educated workforce in the world. And unlike ourselves there is every indication that the Japanese will be able to use them effectively, for their universities have a much better reputation among employers generally than ours.

I. H. F. Kerr

The author is head of the occupational advisory service, University of Sussex.

Keeping the wheels turning

P. J. Thompson examines the case for degrees in plant engineering

A proposal for a new degree course in plant engineering with teratechnology is producing much discussion. Some believe that a career in plant engineering is best served by a first degree in mechanical engineering and specialised post graduate courses. Others, including the department of mechanical and production engineering at Trent Polytechnic, hold that this branch of engineering is as distinctive as those in production, electrical and civil engineering, and is sufficiently in demand that a specialised first degree is long overdue, a view shared by many in industry. This discussion again emphasises the need for the Finniston inquiry into the Engineering Profession.

In the past most plant engineers started their careers as ordinary engineering apprentices and were educated by part-time study, often acquiring a higher national certificate in mechanical engineering plus endorsements to meet institution requirements. As career opportunities arose these engineers specialised in plant engineering through experience gained on the job.

However, as the Whitworth Society submission to the Finniston committee emphasises, this type of career development no longer exists due to changes in the requirements of the engineering institutions and in the activities of the "craft" trade unions. The only route to professional engineering status now is via university or polytechnic degree programmes.

But which is the most suitable degree course for the education of plant engineers? It is my view that this can only be answered by a detailed analysis of the plant engineering function.

The Institution of Plant Engineers states that the function of a plant engineer is the management control of the mechanisms and services of production, and that the plant engineer will therefore have received the education and training necessary to exercise all or part of the following management functions: The design of plant and services to ensure optimum operating efficiency and the reduction of maintenance; installation and commissioning of plant and services; maintenance of fixed and mobile plant, of works services, of building fabrics, fire precaution equipment and safety accesses; control of the operation of fixed and mobile plant and all ancillary equipment from safety, energy conservation, pollution control and general environmental considerations; in collaboration with the production function, the selection and procurement of plant and equipment; selection and control of equipment, tools and consumable stores necessary for the efficient maintenance of plant, services and buildings; design of cost, budgetary and progress systems; control and supervision of staff and operatives; to supervise the training and education of potential plant engineers, staff and operatives.

One of the main tasks is to plan and organize maintenance. It is essential for any planned maintenance scheme to keep up-to-date and readily available records of the maintenance work done on each item of plant, particularly using computer records. Clearly, to be effective in this work needs a background in computer systems, statistics and reliability engineering.

In 1970 the Government, through the Ministry of Technology, greatly assisted the development of plant engineering when it set up a working party on maintenance engineering. In the report of the working party the main facts which emerged were:

- Direct costs of maintenance in engineering in British manufacturing industry were then £1,100m per annum.
- Maintenance staff productivity could be raised by 50 per cent, giving a reduction in costs of £ to £500m.
- Inadequate maintenance a production in at least 20 pe of firms, resulting in loss of from plant which may have productive; possible savings £200m to £300m.
- Education and training def for maintenance engineers existed at technician level.

It was appreciated at the t that maintenance could be re sign of plant and equipment new word, "terotechnology" esigned to cover this very wide f This work has since been exam by the Committee on Terot nology originally established by t Department of Trade and Indus

Terotechnology brings toget practices which in combina make a major contribution towa ensuring that the "permanent sources" of a company—its ha ware—are provided, cared for eventually disposed of in an e nomic way. This involves bring together existing knowledge fr many areas. The broad objectiv of education and training in te technology are:—

- To develop the ability to materials and human resources ways that will optimize the ecc owning plant, machinery, buildi and structures.
- To facilitate and ensure feedb of knowledge and experien already gained in those responsi for design, manufacture, operati and maintenance.
- To encourage and develop i use of methods of measuring cri features in the operation machines, equipment, plant buildings.
- To develop ability in the analy of such measurements, and of t tracting the information wh should be fed back to design, ma facture, operation and other fu tions within the organization.

If a degree programme is include terotechnology it is e dent that it must be specifica designed for its inclusion. A m odification of a separate study terotechnology would not be s ficient.

To assess whether a first degr in mechanical engineering is complete foundation for a pla engineering career its content m be compared with the abo requirements. All degree pr grammes in mechanical engineeri provide a thorough grounding i engineering sciences and the application to either design research and development. It generally agreed that if such pr grammes are taken as a preliminary to a career in plant engineering there are shortfalls which ha either to be learnt by experience or via a post graduate programme of study.

The main shortfalls include build ing technology, building services, environmental control, industrial safety, organizational studies, costing, accountancy and terotechnology. Such studies are not those usually associated with an engineering postgraduate programme leading to a higher award and to include them as options in a mechanical engineering first degree programme of normal duration would lead to such a distortion of the original objectives that the integration of such an adapted programme would be in question. It is for these reasons that a new and specialised first degree programme in plant engineering with terotechnology is being suggested.

In assessing the justification for a new engineering degree discipline it is necessary to be able to identify a satisfactory career development to full professional status. In the early part of a career in plant engineering experience in maintenance planning, servicing, commissioning, cost and budgetary control, supervision of plant services and a plant layout and design office would provide adequate career development activities, for which the proposed degree programme provides a suitable educational foundation.

The progress of degree proposals in plant engineering is being closely monitored by the Institution of Plant Engineers who are mindful that their future membership will depend to a significant extent on such programmes. It is clearly their view that a specialized degree programme in plant engineering is a much needed development.

The author is head of the department of mechanical and production engineering, Trent Polytechnic.

Degrees involving training in terotechnology require restructuring.

THE TIMES

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Last chance on salaries

The moment of truth is rapidly approaching for the Association of University Teachers. The point has almost been reached at which either a salary increase limited to 10 per cent must be accepted or else militant action taken to force the Government to think again.

Indeed, even this stark alternative probably overstates the freedom of manoeuvre left to the AUT. Even if all its members wholeheartedly supported a militant course it seems unlikely that the most disruptive action which the AUT could command would be enough to shake the Government's determination to stick to its 10 per cent policy. There is simply no hope that university teachers can win where firemen have lost, and where even miners and power workers cannot be sure of victory.

All this has been obvious for some time. It become so soon after the day of action last November when the Government did not give in straight away to the firemen. Certainly by the time of the AUT council meeting at Heriot-Watt just before Christmas there was very little room to doubt that once again—through no fault of their own—the AUT had missed the bus.

Then was probably the time to settle, when the invigorating memory of the day of action was still reasonably fresh. The anomaly could have been preserved intact for use at a better time and the 10 per cent could have been taken entirely as a cost-of-living increase.

University teachers then would have gained the highest possible threshold consistent with their industrial relations muscle and the constraints of incomes policy from which the rectification of the anomaly could later have been calculated, while the anomaly itself would not have been whittled away in the process.

With the benefit of hindsight it is difficult not to conclude that the AUT would have done better to have thought through its dilemma more clearly at the end of last summer. Either it should have joined in a militant alliance with other unions in the public sector to break the 10 per cent policy, although even this would probably not have worked as the determination of the Government to hold the line on pay was clearly much greater than many supposed; or it should have accepted the limitations imposed by the incomes policy at the start and then argued within them for the most advantageous possible arrangements for this year's award and negotiated for the firmest possible promises about the rectification of the anomaly in subsequent years. Instead, it seems to have fallen between two stools: at once not sufficiently militant and yet still too shrill.

Yet the injustice of the university teachers' pay anomaly remains. It would be very sad if the Government had taken advantage of the weakness and the negotiating naivety of the AUT to win an easy victory. It should be their desire as much as that of the AUT to see this injustice put right, for the sake of the universities.

As *The THES* pointed out at the start of these negotiations, the rectification of the anomaly has as much to do with morale as with money. The cruel but perhaps necessary events of the past few months can only have depressed the morale of university teachers still further.

If her Government colleagues allow her, Mrs Williams should accompany her announcement that university teachers must accept the 10 per cent limit with the most specific promise possible to rectify their anomaly as soon as practicable. If she does not, or if any promise is subsequently broken, then university teachers should cast aside their inhibitions about industrial action. This has been the Government's last chance: they should not be given another.

Social work staffing

At first glance the dispute between Middlesex Polytechnic and the Central Council for Education and Training in Social Work is a simple one. The council broadly supports the contention of staff and students at the polytechnic that new appointments are urgently needed to restore staffing levels on the polytechnic's three social work courses. The director, on the other hand, maintains that the polytechnic's financial woes prevent him from responding to these requests in full.

But the dispute also raises the thorny question of how viable it is to run polytechnics within the complex matrix of educational and financial constraints imposed on them by outside bodies. In the Middlesex case, the polytechnic must have regard both to the legitimate educational views of the CCETSW as the relevant validating body and the financial controls expressed through the maintaining local authorities and the pooling committee.

In these circumstances polytechnic directors are forced willy nilly to assume the role of arbiters. They are confronted on the financial side by two sets of constraints. One is the national staffing norms recommended by the local authorities' pooling committee; the other is the specific financial predicament of the polytechnic, reflected in its local budget.

Much has been made in the Middlesex dispute of the fact that the pooling committee's staffing norms are based on a different calculation from that used by the CCETSW. The council insists on one social work tutor for every 10 students while the pooling committee takes into account all staff who contribute to a course whether they are social work tutors or not.

It is the second financial constraint—the specific predicament of the polytechnic—that is therefore more crucial. If a polytechnic does not have enough money to appoint new staff unhappy decisions about course priorities cannot be avoided. But those decisions ought not to be the domain of the director alone.

They require within the institution the same interplay of educational and financial considerations reflected outside by the pooling committee and the validating bodies. This means that academic boards and directors should speak to their governing bodies about the pattern of course provision with equal authority.

Towards credit transfer

The news that at last some serious work is to be done on whether a national credit transfer scheme is feasible is very welcome. Few reforms could do more to open up higher education to new groups in the community while allowing academic institutions to pursue their own chosen paths with the minimum of political or bureaucratic interference.

The increase in student demand that such a scheme is likely to stimulate may also be welcome in the middle 1980s when the spectre of demographic decline acquires more substance.

However, there is still an impression that this question is not being approached with sufficient urgency or vigour. As so often in Britain we seem to be putting the cart before the horse, hoping that if we talk long enough about the details a decision in principle will somehow emerge.

What is needed is not a feasibility study but a substantial and public commitment by the Government, the universities, the Council for National Academic Awards, the polytechnics and the others involved to the creation of a national transfer service. Sadly, for too many in higher education, with the honourable exceptions of the CNAA and the Open University, credit transfer still seems to be a technical exercise and a peripheral issue. It is not.

LETTERS TO THE EDITOR

University versus polytechnic pay

Sir,—Ernest Rudd (*THES* February 3) himself complains of too facile comparisons between university and polytechnic salaries whilst being quite happy to compound the over-facility himself with comments on the comparison of academic qualifications which include the startling phrase "roughly as at least the level of a good PhD". I had always suspected that some PhD's might be better than others—or should that be less rough than others? Are university staffs so naive or so arrogant as to believe that "intellectual quality" can be measured solely by qualifications or that it is all that matters for a teacher?

Could I try to avoid being too deeply drawn into the endless and endlessly repetitive parade of half truth and untruth some stray thoughts? If the grass is so green and lush on the polytechnic side of the great divide why are not our university colleagues rushing to force us, the polytechnic thickheads, out of jobs by dazzling our employers with their brilliance? They could try to do so by applying for senior posts in our sector.

They do not do so very often. If they did, it could be that their lack of professional and teaching qualifications, professional experience and contact with employers would fail to be attractive to polytechnic governors. The point is that we are not being over-burdened with applicants from the university sector poverty stricken though we are told it is. I wonder why?

What is most disturbing in the debate is the evidences that the Association of University Teachers feels that its case for a better pay deal can best be fought by attempting to pull others down. It is sad to see such oafishness, more compatible with the scruffier end of industrial trades union debating tactics, arising in a profession which used to and thinks of its members as scholars and gentlemen.

Could I commend to Mr Rudd the Association of Polytechnic Teachers' pay policy document, which does seem to me at least to offer reason and restraint even to the extent of acknowledging the merit of the AUT case. The all-purpose smears of the AUT may back-fire on them. I am beginning to hope so but then I am neither scholar nor gentleman! The Government must surely be delighted to see us tearing each other's cases apart for them.

Finally if, as Mr Rudd claims, research masters students are being supervised in universities by persons paid half or less than a polytechnic principal lecturer (maximum £8,070) this implies that universities are trusting their academic standards to the very young and very inexperienced. Maybe that is why Mr Rudd slipped in an inadvertent "good" as a qualifier to describe an academic designation which is normally meant to be regarded as a specific yardstick of high and uniform quality?

Yours sincerely,

DONALD DAVINSON,
Head of School of Librarianship,
Leeds Polytechnic.

Sir,—It was encouraging to read that Ernest Rudd and his colleagues "are glad to do our bit towards raising the academic level of the polytechnics". We wonder, however, if he has ever thought of joining the staff of a polytechnic and working from within to raise standards? Surely his contribution would be much greater as a participant than it can ever be as a spectator on the sidelines (albeit one who retrieves the occasional stray ball).

And just think, Mr Rudd, you would have the added bonus of those vastly superior terms and conditions of employment which members of your association have commented on so frequently of late.

Yours sincerely,

K. M. OLDHAM,
(head of the accounting academic group),
MARGARET OLDHAM,
(business studies academic group),
Hatfield Polytechnic.

London nonsense

Sir,—According to his despatch from Cloud-cuckoo Professor J. A. G. Griffith the post of vice-chancellor of University of London as "a job" of "presiding over the functional emptiness" at a centre" which should "carry salary". The short answer is all this is merely nonsense.

With the exception of Oxford Cambridge, where the structure administration is wholly differ all the other universities in country have found it necessary have a full-time vice-chanc Why the largest and most of our universities should be exception is something that Profe Griffith has never explained.

It would indeed be an intere exercise if he told us how the versity should, in his view, be we have all got a little tired being told how he thinks it sh not. It is a pity that a teache his eminence should take narrow and blinkered view. only adequate description of contentions is in the well- words of George Orwell—"you to be an intellectual to be things like that—no ordinary could be such a fool".

Yours sincerely,

J. STEWART COOK,
Member of Senate,
University of London.

Full-time equivalents

Sir,—Professor Dahrendorf in article "FTEs, or the higher ness" (*THES*, January 20) quest the validity of the concept of time equivalent students as main basis for allocating finance universities. He goes on: " an important question, incidenta whether adults and those who to come in for the occasi lecture or course have this opp tunity. But they are not counted all, or perhaps as one tenth of FTE."

The present evidence would se to favour the first hypothesis such students are not counted until the current exercise by University Statistical Record completed there is no over record of the number of continu education courses provided by versities or of the numbers students attending such course Post-experience updating course for professional people form of the spectrum of continuing cation and it is not clear how are expected to be financed other than through the fee income. result of this is to imply that activities are not part of a univer sity function.

This is undesirable since such courses can provide a valuable demic input to universities related to the practical use of knowledge by professional people in the field and to the actual problems which they face. Furthermore the provision of post-experience courses a visible contribution by universities to the satisfying of community needs and a demonstration of the industry/university collaboration which has been advocated.

It is to be hoped that the University Grants Committee, armed with the statistics from the University Statistical Record, will be able to devise a system for recognizing such courses both financially and in terms of status. The argument that "industry can pay" hardly seems justified when industry, through the tax system, is already one of the major providers of university funds. Such arguments cannot be wholly justified as they lead to a situation where the main criterion for running a course is the ability of the student to pay. This hits hard at public bodies, voluntary organizations and small firms struggling to develop new ideas as well as individual students wishing to improve themselves and invest in their own futures.

Yours faithfully,

R. L. CANNELL,
Pro-vice-chancellor,
Director, Centre for Extension Studies,
Loughborough University of Technology.

Deeper N&F levels

Sir,—In responding to Professor Burge's comments on N and F levels (*THES* January 20) I am taking issue not so much with his argument in itself—indeed, it raises points that demand consideration—as with the deeper situation in higher education that his letter evidences.

He tells of the "volume" of physical science taught, and of one half and three-quarters of an A level; and in discussing curriculum there has been a strong tendency to think in quantitative terms, of syllabus content. But this is only one form of definition. I would go a long way in trading mere content for a proper understanding of basic concepts, and for a unity that integrates laterally across a complete syllabus. This is an approach to defining curriculum that uses the idea of effect on the student rather than that of ground covered.

I saw the development of N and F within my own subject and also the initial drafts of some other subject groups; it seemed to me that we had the beginnings of a refreshingly different approach to syllabus construction. If higher education persists in a preoccupation with content alone, it will do a disservice to itself as well as to secondary education and the professions.

Yours faithfully,

M. T. DEERE,
Vice-principal,
South East London College.

Social security payments

Sir,—In the past weeks we have had a number of inquiries from students who were refused supplementary benefit during the Christmas vacation. Some were pursuing a course at first degree level for the second time. It is clearly the case that they fall outside the scope of the Social Security (Miscellaneous Provisions) Act since in each case the student concerned is without a grant.

Fees are staggeringly high this year and students who have to find them and money for their own maintenance during term time have a considerable financial burden to shoulder. If they are unable to find work during the vacations then supplementary benefit is their last but very necessary resort.

We would like to bring this matter to the attention of Mr Orme, the Minister of State for Social Security, and the Supplementary Benefit Commissions.

Yours faithfully,

JIM MURRAY,
research officer,
KEITH LESLIE,
senior president,
Edinburgh University Students' Association.

Better student unions

Sir,—The answer to increased student representation is not to replace the power of general meetings with the paper democracy of student representative councils, as Mr Wilks and the Federation of Conservative Students suggest (*THES*, February 3).

I am surprised that he endorses such a proposal, especially when he reflects on the student union council at Leicester University, where he was president. Although elected by secret ballot in many cases the turnout was far from outstanding, producing a motley bunch of political lightweights—by no means a true reflection of the membership.

Mr Wilks and myself tried hard to increase attendances at general meetings, with some success. They were well publicized, the issues were made clear and the notion of a balanced order paper introduced, with relevant student issues high on the agenda. These, together with persuading the authorities to set aside free time for such meetings, are the prerequisites for high attendance.

Yours faithfully,

JEFF SHEAR,
formerly sabbatical officer,
Leicester University Student Union.

The many inconsistencies in life of Sir Thomas More

This week is the 500th anniversary of More's birth. Denys Hay offers a quincentennial reassessment

t is tempting to look at a man's life s self-consistent, especially from he vantage point of half a millennium and especially when we have hat epigrammatic summary, "the King's good servant, but God's first". Yet the moment we look more closely at More's life we see cross currents of paradox, such as re all display, few of us facing as e did the kind of tragic conclusion which lends itself to simplicity.

Perhaps the first oddity is that More, who had been educated in n extremely old fashioned way by is father the judge (a London grammar school, the fuddy-duddy University of Oxford, the Inns of Court) should have ended up as the greatest English humanist. By humanist we mean, of course, cultivation of the classical languages nd especially Latin.

More's mastery of the new learning was, it must be admitted, less urprising in the early decades of he sixteenth century than it would ave been a generation earlier. The ulcrum of cultural change was hifting from Italy to the north of he Alps; soon, with a Hapsburg uling in Spain, Burgundy and Germany, the centre of significant olitics was going to leave Italy as well. If More did not visit Italy he mingled with larger talents in he North than he could have found n Rome, let alone Florence. There was no Italian who could hold a candle to Erasmus, who wrote his Praise of Folly in More's house and founded its title on More's name Moriae = folly).

But there are many other apparent inconsistencies. More was trained for a legal career and indeed went along it in the end to the very top as Lord Chancellor 1529). Yet this secular career tore him from a deep attachment to the Church. While he was studying at the Inns of Court he lived with the Carthusians, although he did not take vows. And throughout his life the pull of the cloister was acute, until, at the end, he saw from the Tower the martyrs from the Charterhouse going to their execution.

With this religious sentiment went, of course, a choice between celibacy and marriage and More married twice, first Jane Colt, who died in 1511, and then Alice Middleton, to look after his family. Matrimony was a committing state for it precluded the sort of advancement in the Church that Cardinal Wolsey had enjoyed; it permitted a different power structure from which Thomas Cromwell was to emerge as peer and plutocrat—and (like More) victim of the executioner's axe. It was tricky being the king's good servant.

More's own views on certain aspects of this antithesis are discussed or implied in *Utopia*, his most remarkable book. He began this in 1515 when on a wearisome negotiation in Flanders. Professor Hexter has shown that the second book was written then, the part describing the land of Nowhere, where, on a basis of slavery, the rest of the community live a life of high-minded egalitarianism.

But book I (as they were to be printed, first in 1518) was written later when More was in London again. It consists of a dialogue, supposedly in Cardinal Morton's house, where More had spent some boyish times as a page, in which the whole question of the prince and his courtiers is caustically surveyed. It is always hard in dialogue to identify the author's own voice, but there can seldom have been a picture more ruthlessly accurate of the selfishness, brutality, and *Realpolitik* of all governments and their servants.

What is More's position in this? We know that within a year More became a courtier and councillor himself. His judgment in the so-called "dialogue of counsel" (i.e. *Utopia* I) was that men of education and good-will should try to influence princes into wise and humane courses of action. It was to tax More's powers to breaking point; but the book added a new genre to world literature, a new category to political speculation.

Other contradictions, there are in plenty: More as Speaker of the Commons (1523), up to every parliamentary trick, clean and faintly corrupt, which the king's manager of parliament had to resort to. Then there is the gentle humanitarian persecuting heretics, presenting in very brutal fashion the active side of his theoretical attack on Luther which he had published anonymously in 1523 (he probably also helped Henry with the famous defence of Catholicism, the *Assertio septem Sacramentorum* of 1521, of the Faith").

Perhaps the final enigma lies in the exact nature of the cause for which More was executed. In simple terms it was a refusal to take the Oath of Supremacy, enacted in the Act of Succession in 1534, and a refusal also to fall into any of the pits of disloyalty dug by the crawling creatures of the king, organized by Cromwell. One thing is certain. It is not the case that More's attainder and execution (6 July, 1535) was in any meaningful sense a demonstration of obedience to the pope as such.

In his last letter, written in the Tower, he insists that he has always regarded a General Council as the supreme authority in the Church, and not the pope. He died as a gesture to preserve the "common corps of Christendom". We may doubt exactly what he meant by this. But there cannot be any doubt that he rightly anticipated a world in which Christianity was collapsing into a score, perhaps hundreds, of rival churches.

Did he forget that already the Franciscans had evolved four separate Orders? That the friars of all persuasions were fighting each other tooth and nail? That there were Waldensians still and now Hussites? Was there still a "common corps of Christendom" to defend?

The news of the death of More and Fisher shocked Roman Catholic Europe and not least Erasmus who, like More, enjoyed good fellowship and had seen the young Henry VIII as a harbinger of enlightened monarchy, though they lived to see him just as repellent as any other autocrat of the time. Erasmus died in 1536, perhaps partly because of despair at the execution of More. It reminds us of More's enormous capacity for friendship.

What is the dynamo behind a man's conscience? What made More tick? Well, of one thing we can be sure. He may have unsatisfied leanings to the monastic life, but he rejoiced in his family at Bucklersbury and Chelsea. "Merry" is one of his favourite words, even to the very last hours of his life. The portraits now gathered in the fine exhibition in the National Portrait Gallery show this. Perhaps all one can say is that any man who would make a good monk would also make a good husband and father. But to write *Utopia* is something we can't explain, nor More's other elegant and passionate works in English and Latin.

In this context it is perhaps right to end with his combined mastery both of English and Latin. He could also always write at will either the northern secretary hand or the italic coming in from Italy. It was this last—the Latin and the italic—that were to begin to permeate English education just at this time. The grammar schools (Latin grammar!) were multiplying, their curriculum steadily moving to the classics, and the mixture arrived at by the end of More's century was to persist almost until the end of the nineteenth. But would More have approved of Cicero slowly ousting St. Paul?

The author is professor of medieval and renaissance history, University of Edinburgh.

The plastic heron conundrum and art for the many

Roy Shaw explains the difficulties in bringing the arts to adult learners

Adult education and arts organizations are both concerned with the problem of the few and the many. Their job is to make what was confined to an élite of the learned or cultivated widely accessible. In doing this, they immediately come up against the problem of the diversity of levels of ability and interest which exist in the adult public. Many an adult class contains both graduates and people who left school at the minimum school-leaving age, and the adult tutor is skilled in serving the needs of both together.

In the arts, however, some argue for accepting the diversity of taste which exists. This has been most sharply expressed by Marghanita Laski, who once condemned the expenditure of public money on subsidizing the arts in these plausible terms: "Many people are, after all, made happy not by high art . . . but by pop art; not by Bach but by Beatles; not by ballet but by dance halls; not by Henry Moore but by plastic herons brooding over garden pools." The same point is made more succinctly by an arts administrator reporting on mobile provision in rural communities: "It was noted that 'high art' was not relevant to most of the population."

If he had said "immediately relevant", many adult educators would agree with him; but their experience is that so-called high art can, through education, be made accessible to people who did not spontaneously respond to it. The response to Miss Laski's argument has to be more complex. She is opposing pop art and high art, but in the experience of many of us both may be enjoyed by the same person.

The tragedy is that some are confined by the poverty of their educational and cultural background to enjoyment merely of pop art. They are missing as much as the High Court judge or the distinguished academic who has either never heard of the Beatles or considers them suitable fare for the lower orders only. On the other hand, I cannot believe that plastic herons do anything for anybody and to argue that people should be left in the state of aesthetic poverty where they would prefer these to Henry Moore, seems to me like a form of cultural apartheid.

Those both in adult education and the arts who concentrate on "relevance" are in danger of slipping into the "Don't teach my boy poetry . . ." position. Last year I saw a play written and performed specially for miners and other workers. One working man declined to watch it and when asked why said: "What do I want with a play about miners? I'm a bloody railway man." This suggests to me the *reductio ad absurdum* of the relevance argument: special plays for shop assistants, dentists, etc, etc. Of course, I would agree that both in the arts and education you have to begin where people are, but where you end up may be a very different place.

Another common problem for both adult educators and arts providers is the reaction against the role of effort by the "consumer". Over a century ago, John Henry Newman was attacking the idea that "all learning is to be without effort", though the idea has outlived him and is probably stronger now than when he attacked it. In the arts, the equivalent attitude is the "arts are fun" approach. This is a dangerous half-truth, whose other half is "the arts are effort" and the effort is the basis of greater enjoyment rather than fun.

A problem in the arts area which could raise problems for the integration of arts provision and adult education is the opposing of appreciation and creation. In most adult education courses on the arts, the emphasis is on appreciation of what some arts people call the heritage arts, which they compare unfavourably with involving people in creative work in the arts. This approach is supported by a recent Schools Council working paper on *Arts and the Adolescent*, which is based on the hypothesis that the arts offer education of the feelings by offering a process rather than a product, hence music education should be music-making.

The argument is reinforced by the assertion that appreciation is a passive activity whereas participation is an active one. The contrast is succinctly emphasized in the statement by a community artist, quoted with approval in the Redcliffe-Maud Report: "Hanging a picture on a wall and inviting people to come and look at it is the easiest possible thing to do. We are trying to do something much harder: to tap the creativity in everyone."

Adult education has for many years accepted a duty not simply to provide what is asked for, but stimulate demand. I began my own career in adult education as an organizing tutor for the WEA, and as such I did a great deal of what is now called in the arts world *animation*. The word comes from France and has nothing to do with Walt Disney; rather it signifies a process by which individuals and communities are activated and animated. Those who do this are called *animateurs*, a word which we had better take into the English language with as good grace as possible, since we have no equivalent for it. Promoters in adult education and the arts have a great deal to learn from each other, especially those involved on the front-line in both areas: those who work in community adult education and in community arts.

Mysteriously, few people seem to have been aware, even in the Arts Council itself, that the Arts Council has an educational task prescribed by its Charter. It is charged "to develop and improve the knowledge, understanding and practice of the arts". Fewer are perhaps aware that the 1972 Local Government Act steals these very words to describe a role which local authorities *may* play in the arts. So the Arts Council, the local authorities and adult education organizations are in some respects co-workers in a common task. Those local authorities which combine an arts and an adult educational role are in an enviable position to ensure collaboration between these complementary activities.

The Arts Council's charter does not mean that it should become a huge national organization for the direct provision of arts education. Its Charter also says that it should cooperate with other bodies to achieve its main aims. This means that the Arts Council, and by implication the regional arts associations, should liaise with adult education organizations to achieve the twin purposes of diffusing the arts throughout the country and developing the knowledge and understanding of them.

The Arts Council's special expertise, based on over 30 years experience, is in funding the arts and distributing them throughout the country. It needs the expertise of the adult educator, which derives from a tradition over a century old, to fulfil its duty to make the arts truly accessible.

Finally, let me mention two kinds of institution which, while maintaining their distinctive roles, should become more and more like one another: arts centres and adult education centres. My impression is that adult education centres have ventured more into arts provision than arts centres have ventured into adult education—except in the important area of craft.

Redcliffe-Maud reported that there were few channels for regular communication between people working in the arts and those working in adult education. I would like to see joint working groups in every region. Working groups, rather than standing committees, since both the arts and adult education have, in all conscience, enough committees. These groups should be complemented by close liaison between the partners to be carried out by individuals on both sides.

The author is Secretary-General of the Arts Council

BOOKS

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Springer International, £9.00
ISBN 0 387 08307

This unusual book is a collaboration by two remarkably gifted men, who each encapsulates a life-time of thought. So the poor reviewer has to judge the results of a century of cogitation by two thinkers, acknowledged by the highest honours—the philosopher Sir Karl Popper and the neurophysiologist Sir John Eccles—on questions most of us do not begin to know how to ask, let alone answer. This suggests the first Great Thought: perhaps well formulated questions are very close to being answers. Perhaps the principal role of philosophers is to formulate questions so that scientists can perform the final coup de grace by winning critical experimental games against Nature.

According to Popper the scientist can only win by losing. That is, he can only gain knowledge by refuting (or disconfirming) his hypotheses, and never by confirming hypotheses. Popper has also rejected (*Objective Knowledge*, 1972) the gaining of knowledge by induction from instances, which has startling implications for how we should think about learning, in animals and men. He also denies that hypotheses can be predicted; or the probability of their truth guessed prior to testing. He also holds that there are infinitely many conceivable hypotheses to select from (so it is not entirely clear how refuting them, one by one, can gain us knowledge).

From all this it is obvious that Popper does far more than ask questions: he produces answers of unusual interest. He is celebrated for telling scientists how they should carry out their experiments, and he also has powerful suggestions on how to think about history, society, and as we see here—the mind.

Sir John Eccles is highly distinguished for his work on what are the titles of two of his books: *Reflex Activity of the Spinal Cord* (1932) and the *Physiology of Synapses* (1964). He has also written *Neurophysiological Basis of Mind* (1953). He ends his scientific neurological books with the philosophic notion that the synapses (the switches of the nervous system) are somehow controlled by superhuman forces and intentions, somewhat as though God plays upon the keyboard of us, His instrument. This is a view which is not altogether accepted by other neurologists.

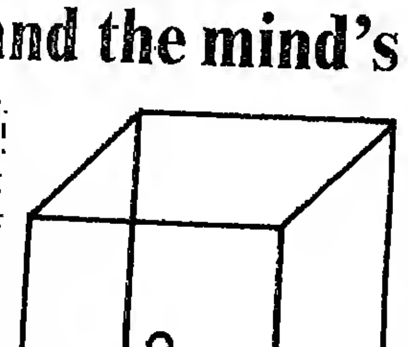
The title, *The Self and its Brain*, perhaps suggests such a dualism. The reader is not disappointed. The conclusion is that there is brain and there is mind, and there is a weak interaction between the two. Popper is avowedly non-religious, while Eccles as we have said takes the other view; but in the final sections, which are tape-recorded discussions, they settle for mind rather than God as controlling us, through the mechanisms of the brain, with God as long stop. The reasons advanced are in part tradition, and in part experimental observation (and here I am far from sure that Popper is being consistent with his own knowledge-only-by-hypothesis-refutation stricture). They support weak interaction mind-brain parallelism, by saying that first this is the longest standing belief of mankind through the history of recorded thought, second, that there are certain *experiences* which demonstrate it. Let us turn to these.

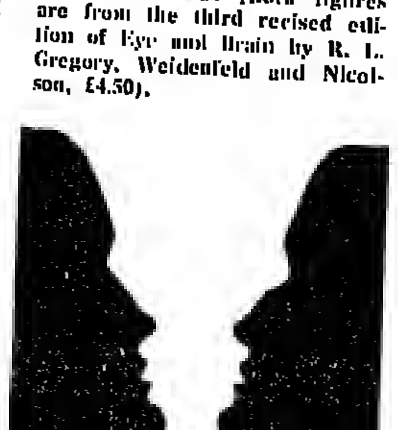
The Canadian brain surgeon Wilder Penfield carried out what are justly highly celebrated experiments, in which small regions of the surface of the brains of human patients were stimulated with fine wires (electrodes), while they were undergoing surgery for epileptic problems, and were asked to report their experiences. What happened depended of course on where the electrode was placed; but pain was never elicited. The experiences which interest Popper and Eccles were vivid sequences of memories evoked by the stimulation, while at the same time the patient was aware that he was in the operating theatre having his brain stimulated.

It is this *double* experience which is accepted as evidence of mind-brain dualism. A further example can very easily be tried out by the reader. It concerns optical illusions. If we look at a drawing of a skeleton cube (known in the trade as a Necker cube) it will frequently reverse in apparent depth, so that one moment a given face seems to lie in front, and then suddenly it "flips" to become the back face of the cube. (I discuss this at length in a book called *The Intelligent Eye*, 1970). Now by concentrating hard, one may seem to be able to prevent the cube reversing, or one may make it flip. This certainly tends to happen with eye movements, or blinks and possibly there is indeed some "central" control which is what is relevant here. Now they argue, *here mind is controlling the brain*, generally to unify and make sense of experience.

It is also suggested that the Penfield experiment is important as evidence that man has consciousness, but I assume that this is a slip: for why *these* reports rather than any others, such as wine tasting? What is important is whether this (or any other) evidence from experience, or reported experience, gives evidence of their thesis. This must take us back to how we see science, and how we see philosophy as related to science.

The particular science of relevance here is psychology, and in particular the science of visual perception. Can this tell us about rela-





Ways of seeing: the Necker cube (above) alternates in depth. The face marked by the small circle sometimes appearing as the front and sometimes the back face. By concentrating hard one may make the cube reverse—or prevent it. The figure below alternates spontaneously: sometimes it is seen as two faces and sometimes as a white urn bounded by meaningless black areas. (Both figures are from the third revised edition of Eye and Brain by R. L. Gregory, Weidenfeld and Nicolson, £4.50).

tions between mind and brain; or whether—the Identity Theory—mind and physical brain activity are *the same thing*, but described in different terms (physical and mental terms) so that we are misled into thinking of them as different? Many visual psychologists and physiologists leave this to the philosophers. Few, if any would wish to draw such conclusions from their observations or experimental results. Perhaps similarly, few physicists are prepared to say that their experiments reveal the *ultimate* nature of matter.

The trouble seems to be that, in both cases, we lack a sufficiently general set of working concepts for making inferences across what look like (presumably just because we lack adequate conceptual schemes) unbridgeable gaps. To most scientists, experimental data and observations are powerless by themselves; or at best, interpretations are highly ambiguous. (I suspect that the range of interpretations is only limited by imagination; and we accept statements as true only when imagination runs out of steam in generating alternatives.) To separate some aspects of Necker cube perception from others, (postulating Will, or Mind or whatever) cannot be done without an adequate conceptual scheme in which Will or Mind or whatever have a clear place—but this we have always lacked, and unfortunately still lack although we now have the benefit of this book with its extra century of encapsulated thought. Until it is clearly shown that there cannot be more than one physical (whatever this ultimately means) perceptual brain process going on at a time, there seems no reason to believe that mind rather than brain flips (or does not flip) the Necker cube.

It is at least as plausible (and William of Occam would approve) to say that several brain (or mind) processes are at work. Where (if anywhere) the mind comes in remains as mysterious as ever.

Science is traditionally happy with things *causally* affecting other things. One can certainly become extremely puzzled by "cause" and "things" (both of which may look different to philosophers and scientists) but, if only we could show that mind *does something*, such as affecting the brain or producing telekinesis, then mind would be in the same ball park as hitting billiard balls, and we would all feel more comfortable. Psychology would gain by at last looking like a proper science, which at present it can only do by *denying* consciousness, which hardly helps anyone with toothache or a Necker cube. So it is clear why Popper and Eccles make these statements; but unfortunately they do not seem justified.

In Popper's earlier *Objective Knowledge*, we find the remarkable statement, pages 6-7 (his italics): "the idea of induction by repetition must be due to an error—a kind of optical illusion. In brief: *there is no such thing as induction by repetition*". In this same passage, Popper says that there cannot be any such thing as induction in *psychology*, or in scientific method, or in the history of science. Now this is to give a theory of learning on the basis of a (as it happens, a controversial) logical point. Can one believe that there is no animal or human learning by noting instances to build up inductions? Is it really the case that *all* learning (even in earth worms) is putting up hypotheses, and refuting them by counter examples? This restriction of Popper's, on what is possible for learning, comes up in the discussion at the end with Eccles (and Eccles seems remarkably pas-

sive at this point a[...] seems to be accepted b[...] To push the poin[...] example: it is perfect[...] make simple electric[...] (as Grey Walter show[...] again to up instances [...] tive adaptive learning [...] which is supposed by [...] in principle impossib[...] us to computers; or rathe[...] of discussion of comp[...] book.

Thinking machines [...] rejected (Popper a[...] "Thus I regard the [...] men are machines not [...] taken, but prone t[...] human ethics", and [...] ". . . Can computer[...] would say without h[...] they can not, in sp[...] unbounded respect for [...] ing who thought the [...] I predict that we shall [...] to build computers w[...] subjective experience." [...] to be assumed that "[...] jective experience" h[...] thinking, while holding [...] denied for ever to mac[...] ever subtle their design[...] should be stated that [...] a considerable informa[...] that the first is already [...] that the second is perh[...] doubt. The fact is that [...] buy for £200 (by mail [...] an American firm) a [...] playing computer which [...] you every time, unless [...] above average player. [...] human comparison, go[...] so in a normal sense in[...] chess, which is a task [...] difficult for us.

The Mars Lander, w[...] formed experiments to [...] Mars, was a highly [...] decision-taking robot [...] essentially on its own [...] and did a job to be [...] There are many other [...] such as machines which [...] size objects from vario[...] view with television ca[...] and they may even be [...] Necker cubes! Such m[...] already in use in Ame[...] Japanese industry, the[...] established British exper[...] as philosophers, have d[...] they are impossible. No[...] sweep of theory and exp[...] psychology is to look [...] of data-processing stra[...] are needed to give the[...] perception—whether by [...] or brains. Computers th[...] test-beds of cognitive the[...] surely not adequate to d[...] this as irrelevant.

This book has great [...] and many fascinating d[...] especially of early ideas [...] clusions scarcely justify [...] ney, which is hard and [...] the bumps along the wa[...] the reader (whether h[...] brain!) think for himself [...] is good.

Richard G[...]

Across the great divide

ass and Status in France:
onomic Change and Social
mobility 1945-1975
Jane Marceau
ford University Press, £6.00
SN 0 19 827217 0

[...]is sometimes hard to reconcile [...] geographical proximity of [...]ance with the great cultural [...]ide between British and French [...]iology. Such nearness ought to [...]courage us to have a greater [...]erest in the workings of a [...]iety very different in many of [...] characteristics to our own. Cer[...]inly attempts are being made to [...]ng British and French social [...]ence closer, notably by the Social [...]ence Research Council. Yet there [...]ll remains a remarkable degree [...] ignorance about the social [...]ucture of France, although coun[...]s vacations there must have [...]tilled certain common sense and [...]reotypical notions of the French [...]ial order in the consciousnesses [...] indigenous social scientists.

Thus Jane Marceau's new book [...]es off the presses at a very oppor[...]e time. Sociologists, along with [...]onomists and geographers, are [...]ecoming much more interested in [...]ropean societies, no doubt partly [...] a result of our inclusion in the [...]C. However this scholarly and [...]mprehensive review of the study [...] class and status in France shows [...]t we have a good deal to master. [...]rhaps because of a combination [...] cultural and institutional factors, [...]ench sociology is a very different [...]imal to its British counterpart—[...] fact clearly demonstrated by this [...]ok. Theoretically, much greater [...]ention tends to be placed on [...]istemological and methodological [...]ues than here (although recent [...]nds in British sociology suggest [...] movement in this direction). The [...]er side of this coin is the propen[...]y of the French to form exclu[...]e "schools" with monopolies [...]er certain journals and little inter[...]mmunication.

Although the framework of this [...]ok is set by Marceau's theoretical [...]lliance on Bourdieu and Poul[...]tzas, it deals very fully with the [...]rsistence of significant inequali[...]es in French society since 1945. [...]any popular commentators on [...]ance—like John Ardagh—have [...]phasized the dynamic processes [...] renewal and change which have [...]ansformed France from an under[...]eveloped capitalist society into one [...]hich seemed to many observers, at [...]ast in the early seventies, to be [...]e model for all advanced post-[...]dustrial societies of the 1980s. But [...] Marceau so clearly points out, [...]erhaps "too much emphasis has [...]en laid on the positive achieve[...]ents of the French economy, and [...]e beneficent role of the techno[...]ats" considering that power re[...]ains rooted in the bourgeoisie, and [...]at social mobility has by any [...]andards been limited. It is cer[...]inly too easy to assume that the [...]eal improvements in living stan[...]rds experienced over the last 30 [...]ears by the French were matched [...]y a profound transformation of the [...]cial structure. The book all too [...]early documents the persistence [...] structural inequality and even its [...]idening as France has developed a [...]odern, urbanized industrial eco[...]omy.

In covering so wide a theme, [...]hich incorporates such diverse [...]lements as stratification, income, [...]axation, ideology, education, [...]ealth, and political power, [...]arceau has managed to deal fairly [...]ith all her sources. Indeed the [...]ook, which has an excellent bib[...]ography, is an ideal introduction [...] the study of French society. My [...]nly carps are that it is fairly short [...]r such an important subject, and [...]hat a lot of typographical errors [...]eem to have crept in, at a couple [...] points making sentences unin[...]lligible. Apart from that, the [...]ook is an important addition to [...]e sociological literature on strati[...]cation, and deserves to be com[...]emented by further studies of the [...]ructure of European societies.

Peter Hamilton

Instability at sea and on dry land

Catastrophe Theory: Selected Papers, 1972-1977
by E. C. Zeeman
Addison-Wesley, $26.50 and $14.50
ISBN 0 201 09014 7 and 0 09015 5

The present state of catastrophe theory (CT) may be likened to that of the theory of boundary-value problems at an early stage—in the sense that the primary activity involves specifying phenomena for which the *elementary catastrophes* (archetypal forms of discontinuous behaviour) provide models. The existence and uniqueness theorems for partial differential equations have a counterpart in Thom's basic *classification theorem*, which describes the seven possible elementary catastrophes for systems having a control space of dimension at most four, and which characterizes these seven modes of discontinuity in terms of potential functions and their stationary values.

Thom himself is very cautious about the predictive value of CT whereas Zeeman is active in applying the theory to diverse scientific problems. This has led to a debate in which the present and future status of CT is examined. The appearance of this selection of Zeeman's papers (including some joint work) is likely to enlarge the original debate.

Most of the papers are devoted to applications of the elementary catastrophes to problems in the biological, social and physical sciences. It goes without saying that any theory which can be used fruitfully over such a range of fields can rarely provide quantitative predictions; but it is precisely in the identification of unobvious modes of discontinuous behaviour, in systems governed by continuously-varying control parameters, that the practical value of CT lies. Zeeman believes that, within the coming decade, CT will be found useful in modelling many phenomena which have resisted classical methods.

It should be emphasized that the detailed application of CT to any practical problem requires extensive preparation and (especially for non-physical applications) careful experiment and interpretation. In particular, the representation of the potential may be hard to justify; and the explanation of a dynamic causing the most probable modes of behaviour of the system to correspond to stationary (usually, minimal) values of the potential, may be another difficulty. Indeed, the resolution of such difficulties occupies the bulk of some of the non-mathematical papers. The basic problem is that many of these subjects have never been treated mathematically before, so that considerable reorganization is necessary before even the most elementary model can be formulated.

The main mathematical paper contains a complete proof of Thom's theorem, including, as one step, a proof of the Malgrange preparation theorem (an extension to smooth functions of the classical preparation theorem of Weierstrass) which reduces the classification of singularities to a problem in algebraic geometry. It is shown how the essential behaviour of any system described by a potential is determined by the initial terms in the Taylor series for the potential (rather than by the infinite "tail").

In the non-mathematical papers, the thoroughness of the studies is impressive. The explanation of the background (from biology, sociology, and so on) is most instructive, and many intricate diagrams are used in the exposition. The crucial problem in each case is to understand the morphology, and to use this understanding to propose a model and a dynamic. As one would expect, this task is most difficult in the social sciences, and it is over these applications that the debate is most intensive. Even when no exact predictions are possible, the determination of the bifurcation set is often far from easy and involves subtle arguments. The subjects treated range from the stability of ships to the instability of stock exchanges, and from brain modelling to anorexia nervosa. There are also some didactic dialogues, and the original papers of the Thom-Zeeman debate are included, with an extensive bibliography.

Many of the phenomena studied

correspond to the cusp catas[...] which has two conflicting [...] parameters; but most of the [...] elementary catastrophes, [...] the "butterfly", are men[...] some in several different [...] every case, the analysis is [...] as far as possible, and all [...] combinations of parameter[...] are found. It remains to be [...] significant these models are [...] solution of practical problems [...] have defied the traditional [...] of analysis; but whatever [...] come may be, this book [...] approach it embodies, will [...] great interest to anyone who [...] for at least partial explana[...] many matters which have [...] now, been regarded as out[...] domain of mathematics.

The diagrams (and photo[...] are outstanding, and most [...] tive in helping to illustrate [...] going on. There is a useful [...] in which many cross-referen[...] given. The reproduction of [...] ginal papers is very clear, [...] layout is excellent.

J. S. N. B

BOOKS

Fair rents and foul play

Fair Rent and Legal Fiction
by Piers Beirne
Macmillan, £8.95 and £3.95
ISBN 0 333 21308 7 and 21309 5

Nominally, this is a study of the scheme introduced by a Tory Government (the Housing Finance Act, 1972) to impose on public sector housing, the same basis of fixing rents as had been devised by an earlier Labour Government (the Rent Act, 1965, later reenacted by the Rent Act, 1968).

The statutory guidelines for fixing a "fair rent" pose all kinds of legal and valuation anomalies but Piers Beirne, in his extremely short and somewhat muddled treatment of this aspect of the problem, deals with only the more obvious difficulties that are inherent in an attempt to effect parity between the public and the private sectors. Perhaps through his failure to understand the basis of rating valuations and even basic valuation principles, the main purpose of the rent regulation machinery of the 1965 Act (ie, departure from the rigid formula of the 1957 Act) eludes him; and, instead, he appears at times to be trying to find some touchstone represented by a mathematical formula based on rateable value, which will produce the answer.

This study, however, in no way purports to concentrate on the technical term "fair rent" in the two Acts, but to draw some conclusions on housing rental levels in the private and public sectors, and for that purpose to trace the history of housing legislation in this country from the rent strike in Glasgow in 1915 to the Clay Cross rebellion in 1974.

Now an assistant professor of sociology at the University of Connecticut, the author admits that when he wrote it, in 1973, his concern was neither with the housing process as a whole nor even with housing rent legislation as such, and that his analysis of the subject is almost incidental to the major question it poses. Rather was he motivated by a broader concern with law as a vehicle of domination. Personally committed to anarchist politics, he sees law operating in class societies not only as an "overtly *repressive* mechanism for ensuring the continued legitimation of a definite mode of production and of the dominance of a definite ruling class", but also, and even more pervasively, as a form of "*ideological* domination, a form of coercion where the dominant social forces seek to hegemonise global consciousness."

In a lengthy opening chapter on the sociology of law, the author conjures up the spectre of social science that has been haunting jurisprudence this century. And he goes on to suggest the possibility that "either sociological theory will displace jurisprudence as the acceptable moral entrepreneur of the legal domain, or, like absentee landlords, sociologists will lease the study of law but with strict epistemological conditions". But he takes a dim view of the socio-legal courtship, at least between the two parties in their present frame of mind. The stance of classical and academic sociology is wholesomely rejected; so too a legal one, by implication.

Accordingly he adopts an avowedly ideological position to analyse, in a second chapter, the role of rent and the history of housing this century. First, rent is translated from the classic "certain profit issuing out of land" into "tribute paid by the tenant to the perpetual title of capital", and he then goes on to try to show that the housing problems have to a large extent been the result of a failure to see them as a consequence of the capitalist mode of production.

The dialectic is unfamiliar. Instead of depicting the history of the legislation as an indenture being torn in different directions by successive governments, so that he could proceed to trim off the dog-toothed edges of both the lease and counterpart, Beirne somewhat under-emphasizes the effects of party politics, giving greater unity in the picture than it deserves. Maybe this was intended, so as to throw into even greater relief the hubris of the Tories in 1972. The picture is only too often marred, however, by angry daubs, in the form of jibes, such as the estimated value of Paul Channon's house, and the number of shares he held à *propos* nothing, except perhaps to impugn his credibility as a politician). There is one striking and unexplained omission. Though published only now, the study was written in 1973, but it does not include an appendix on the Rent Act 1974. Were readers not entitled to be told that the Tory scheme had hardly even begun to get off the ground when it was jettisoned by the Labour Government in 1975 (the Housing Rents and Subsidies Act)?

The conclusion drawn on the 1972 Act, albeit a thesis advanced for the first time in the closing paragraphs, is that its immediate aim was to ensure that housing rents in the public sector would be doubled, and thus it was the Government's major tool in the housing rent complex for implementing their policy of making the nationalized industries and local authorities (representing non-productive elements) bear the whole cost of their production—this, together with their prices and incomes policy, being required to secure Britain's entry into the EEC and to satisfy IMF creditors. And an immediate consequence seen is the transfer of the increased rental element (which the author regards as in no sense mitigated by the rent rebate scheme also introduced by the Act) first to the state and subsequently to owner-occupiers through increased tax relief on mortgage interest.

In answer to the Pharisaic question, Beirne would undoubtedly have fallen into a double trap. For doctrinal or doctrinaire reasons, he would have denied Caesar's right to a denarius in tribute and demanded that God reduce his tithes by one half.

David Evans

An inveterate theorist looking back

Social Systems and the Evolution of Action Theory
by Talcott Parsons
Collier-Macmillan, £12.00
ISBN 0 02 924800 0

The Parsons problem is still with us and, happily, so is Parsons himself. He no longer dominates sociology as he did in the 20 years after the war; few sociologists would now be prepared to call themselves "Parsonians"; and his acolytes in recent years have been of notably lower standing than his many brilliant early students. He is read less now—a task which was never easy. Yet he remains, in his own jargon, a "reference point" for most of the soul-searching which has beset sociology in the 1970s, sometimes explicitly (as in Gouldner's *The Coming Crisis of Western Sociology*), or implicitly.

This volume contains some of his most notable essays, published—with one exception—in the last decade. It is appropriate that, as Parsons in 1978 reaches his seventy-fifth birthday and completes 50 years of scholarly publication, this volume of essays is organised autobiographically to emphasize some of the main continuities in his academic interests. The book in fact starts with Parsons's only extended essay in autobiography, first published in 1970, a fascinating 50-odd pages, in which his emphasis on early influences—graduate study at the London School of Economics and Heidelberg, and contacts with biology and economics—is particularly striking.

This is followed by essays on two of his teachers at the LSE, Hobhouse (who now reads Hobhouse?) and Malinowski. Parsons justly remarks that "it can be said of Malinowski as he himself said of Frazer, that his anthropological work as a whole is of far higher quality than his explicit general theory". I think much the same can be said of Parsons in turn. The "inveterate theorist" is at his best in his many essays (thinly represented in the present book) dealing with empirical topics. And among his theoretical writings, many sociologists have considered the best to be the earliest, in which he discussed writers such as Weber and Durkheim whose own theories were developed through close involvement with empirical evidence. In contrast, it has long seemed to me that Parsons took a fundamentally wrong turning around 1950, when he began to play with the four-function (AGIL) paradigm, which is highly abstract and, in my opinion, of no significant value in sociology.

At several points in these essays Parsons refers to the early influence on him of A. N. Whitehead's philosophy of science, and particularly of his discussion of the "fallacy of misplaced concreteness". If there is an opposite "fallacy of misplaced abstractness", Parsons has surely fallen foul of it. That is not merely to say, as Robert Merton did 30 years ago, that sociology needs "theories of the middle range" more than "general theory". It is rather in question whether Parsons's abstractions and typologies are of much use even in tackling Parsons's own lifelong interests—the relationship of sociology to biology, psychology and economics, and the structure and development of modern societies. If I may declare an interest, I find Norbert Elias's discussion of precisely these topics, though much briefer and less ethereal, much more cogent.

In his book *Ideology and Social Knowledge*, H. J. Bershady argues that Parsons's fundamental concern has been to defend the ever-recurring charge that social scientific knowledge can never be other than relative and impermanent (Parsons's review of this book is included, with Bershady's response, in this collection.) Whether the pursuit of a set of Kantian eternal categories is the way to achieve this is at best doubtful. Certainly more promising routes are apparent in recent philosophy of science, where a lot has happened since Whitehead.

Unfortunately, while it would be unfair to allege that Parsons's reading is generally out of date or that his intellectual position has remained entirely static, it is clear that his *Problematik* was settled early in his career and has tended to filter his later reading. It would be asking a lot, but it would be very interesting indeed if a scholar of Parsons's great stature were able late in his career to reconsider his whole strategy. But he confesses to not having read Anscombe and von Wright, and there is no mention of other philosophers such as Popper, Kuhn, Gadamer and Habermas whose work would be relevant to such an attack of self-doubt.

The book contains rather too many editorial or printer's errors; for the price, we should expect better proof-reading.

Stephen Mennell

Going back to the land

Land Reform: a World Survey
by Russell King
Bell, £10.50
ISBN 0 7135 1995 9

Although land reform is an unusually emotive topic for social scientists in any way concerned with rural society and the land it occupies, there are few major texts in English on the subject. Only the late Doreen Warriner's *Land Reform in Principle and Practice* is undisputably a major work embracing the whole subject. Few other writers have been able adequately to capture the human interest in the long struggle against the inequality of the ownership of land which is everywhere beset by problems posed by political "solutions" such as the Alliance for Progress, a pan-American programme to promote social justice instituted by John F. Kennedy, which really sought to maintain intact the structure of society in rural areas by offering only a little to the most obviously deprived.

Russell King offers us a textbook loaded with a digest of other people's ideas and crammed with information. He surveys the major issues associated with land reform and considers the attempts at land reform in Latin America, Africa, Asia and the Middle East. Indeed the book might better be entitled *Land Reform in Less Developed Areas*, for only passing reference is made to European land reform. King has succeeded in writing what must surely be required reading for all students approaching land reform for the first time; as a source of information and bibliographic material this volume could scarcely be bettered although with such a rapidly changing subject, it should be revised regularly.

The initial section provides a valuable summary of the issues involved in land reforms and manages to be both accurate and balanced. The account of the history of land reforms is less satisfactory since the interesting treatment of land reform measures in the Ancient World is not supported by any account of the issues associated with land ownership reforms in Western Europe during the Middle Ages. It is also disappointing that the philosophical arguments associated with land reform are barely mentioned.

An examination of the history of the ideas associated with land ownership is instructive and necessary in order to understand the part that land reform has played in many social reform movements since the French Revolution. Such an analysis would have made it more easy to understand why land reform is always so important to social revolutionaries but, in practice, why it is so carefully controlled by urban-biased government. The history of land reform is further complicated in this volume by the avoidance of any analysis of socialist land reforms in Eastern Europe. If the author believes that these had no great influence on reformist policies in the Third World then it is necessary to explain this view and to show what factors *did* influence the development of agrarian policies elsewhere.

The treatment of existing land reforms in Latin America and Asia is excellent although largely factual but a sympathetic view of the more radical reforms aids the appreciation of the differences between countries and their approaches to similar problems. A detailed examination of the section on Latin America emphasized the admirable range of sources from which King has worked and the soundness of his conclusions. The treatment of Mexico is thorough although the strength of the private sector and of foreign interests in contemporary agricultural development does not emerge clearly. In Peru, the radical nature of the reform is missed and the singularity of the creation of huge new collectives (SAIS) under close government supervision merits close attention. In Bolivia, the importance, in several areas, of the spontaneous take-over of estates before the arrival of the *Servicio Nacional de Reforma Agraria* teams needs emphasis as does the complete failure of the reform to affect the enormous cattle ranches of the Beni.

Readers expecting a great deal of detail, an exhaustive source book and a sound survey of the ideas associated with land reform will find satisfaction here. Its failures perhaps appear noticeable only because the author attempts so much and because his judgment, sustained over 400 pages, is so sound.

David Preston

BOOKS

Townscape

An Introduction to the History of English Medieval Towns
by Susan Reynolds
Clarendon Press: Oxford University Press, £7.95
ISBN 0 19 822455 9

The study of English medieval towns has had a chequered history. The 1890s opened a period of intensive research on early records of towns from which a great deal was learnt especially about their economic and constitutional development. This activity culminated with the publication of James Tait's *The Medieval English Borough* in 1936, a work of limited scope (it contains not a single map or plan) but of such magisterial finality that it daunted a whole generation of scholars.

During the last 20 years interest and courage have revived. Archaeology has played a large part in this, and so too have topographical studies of the origins, planning and early expansion of towns. A general introduction to the urban history of medieval England, giving a synthesis based on this new wave of research, meets a felt need—and it is this that Miss Reynolds has provided in the present book.

She is not the first to have done so: Colin Platt's *The English Medieval Town* appeared in 1976. But despite the apparent overlap the two books have different and distinctive roles. Miss Reynolds is well aware of the importance of recent research on the archaeology and geography of medieval towns. But her prime concern is for those aspects of the urban past revealed in written records: "history" in the title can be taken in its narrow sense as the study of the past from documentary sources.

She concentrates particularly on economic and institutional history, thus giving her book a deceptively conservative look. She makes no concessions to a popular readership: there are no illustrations beyond a few very functional maps, and some short Latin quotations are not translated. At the same time she writes lucidly and readably; the book is never dull. It forms an excellent starting point for the student preparing to embark on the many specialized monographs that the subject has produced.

For such a reader some of Miss Reynolds's caveats and arguments may seem superfluous: she flogs some horses that died long since at the hands of academic historians. But she is writing for other readers too, readers likely to be exposed to older (or not so old) local studies in which these horses are very much alive, kicking and neighing. The enthusiast writing on the history of his own town who wishes to place his work in its proper wider context, the urban archaeologist whose use of documentary sources is to be more than amateurish, are among the many who will profit from what Miss Reynolds has to say.

But although it rightly claims to form an introduction to the subject the book is more than an elementary textbook, and while Miss Reynolds sets out to state problems rather than solve them she is not without her own point of view. This is underlined by her insistence on the relevance of continental town history to English developments and by the importance she so rightly attaches to an appreciation of linguistic change: keywords like "borough" or "gild" meant different things at different periods.

She raises some questions in her book simply by implication. Thus, is less than a page devoted to the Jewish communities a realistic evaluation of their contribution to twelfth-century urban growth? Others arise from setting out the present state of research. Can the economy of the eighth and ninth centuries (unlike the Roman period) really have demanded long-range trading-posts but not local marketing centres? Yet this is what the English (and, incidentally, the Irish and Scandinavian) evidence suggests. Many questions of this sort will occur to every reader, for Miss Reynolds is a stimulating writer. Despite formidable erudition she never daunts.

P. D. A. Harvey

Hotbed of sectarian dissent

The Triumph of the Saints: The Separate Churches of London 1616-1649
by Murray Tolmie
Cambridge University Press, £9.00
ISBN 0 521 21507 2

When the Long Parliament met in 1640 effective ecclesiastical authority virtually collapsed. Meanwhile, those who had chafed under Laud's repression proclaimed their hopes of thorough, godly reformation in strident and apocalyptic terms. Puritan zealots formed themselves into "gathered churches" of like-minded believers.

Worried by their radicalism, more conservative Puritans sought to reimpose order and discipline through some kind of presbyterian system, but the rise to power of the army, committed to toleration, frustrated their efforts. As a result, religious individualism and experimentation proceeded largely unchecked for almost two decades, hardening slowly into the sectarian denominations which became the norm after the restoration of the established church in 1660-62.

The religious history of the 1640s was extremely fluid, with churches and congregations undergoing constant fission and fusion. Professor Tolmie attempts to chart these processes in London, an early hotbed of sectarian dissent. He shows that no less than seven of the separate churches of 1642 were offshoots of that founded by Henry Jacob in 1616. Unlike the earlier Brownists, Jacob and his successors did not renounce all contact with the established church and its members. Their broadmindedness was not shared by all their followers, and the church suffered secessions of those committed to doctrinaire separatism and to adult or believers' baptism.

Tolmie shows clearly the horrendous problems of definition facing ecclesiastical historians in this period. There were congregations which were clearly defined and tightly organized, while others were so informal that their existence as "churches" seems questionable. Some were rigidly separatist, while others allowed their members to attend the parish churches occasionally.

Some had lay pastors, others had ordained clergymen, who in some cases still held benefices or lectureships in the established church. There were "churches" composed of the self-designated spiritual elite of a parish and others made up of the "godly" of several parishes: both could be based on a parish church, under the parish minister, thus (in effect) excluding the parish's "ungodly" from communion, though not from sermons.

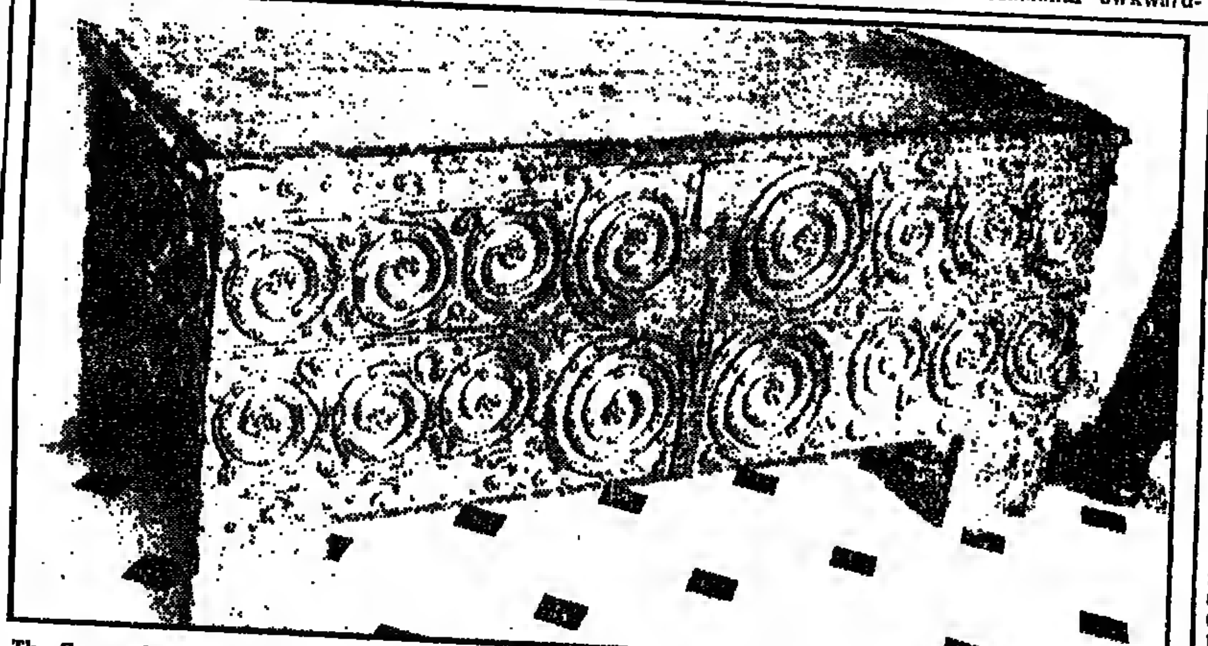
Such complexity and ambiguity, complicated still further by differing views on baptism and predestination, made concerted action by the sects far from easy. They maintained informal contacts, none the less, and supported the general Puritan campaign against the bishops in 1640-42. This same ambiguity made repression difficult, especially as the sects' enemies concentrated their attack initially on lay preachers (whereas some "churches" were led by clergymen). From 1646 the City presbyterians mounted a campaign of repression, whose motivation was as much social as ecclesiastical. The sects united in self-defence, helped by "quasi-separatist" Independents and other sympathisers, and briefly accepted Leveller leadership. Disillusioned by the Levellers' secularism, they soon switched to a more powerful ally, the New Model Army.

The complexity of the subject and Tolmie's occasional awkwardness of style make this ... from easy to read, and ... more useful to special... undergraduates. It is ... vincing on the genesis ... history of the sects ... role in the political events ... 48. Here Tolmie sometimes ... his way, failing to keep ... the changing views of ... cipants in rapidly changing ... stances.

He also sometimes loses ... of perspective: preoccupied ... the sects and the Levellers ... insufficient weight to ... had nothing to do with ... notably the army's role ... Charles I's starting the ... civil war (for real power ... the army, not with civilians ... cals).

Conversely he gives little ... evidence of the sects' influence ... the army in the crucial ... of 1648. This may ... limitations of his evidence ... used no manuscript sources ... few newspapers. Nevertheless ... is much of value in the book ... sheds considerable light ... ginus radicalism in ... London.

John ...



The Carnavalet chest (c 1250-70), of oak and wrought iron, in the Musée Municipal de la Ville de Paris. This is one of many illustrations in Medieval Furniture by Penelope Eames, published by the Furniture History Society, c/o Victoria and Albert Museum, London, at £9.00.

A life of community work

Reconstructing Historical Communities
by Alan Macfarlane, with Sarah Harrison and Charles Jardine
Cambridge University Press, £3.95
ISBN 0 521 21796 2

This is a modestly written, straightforward handbook, cheaply produced, dealing with a simple yet tricky problem. If anyone is planning an ambitious work of local history, intending to gather all the available historical information on the whole population of a village or town over a certain period, he should read this first. It will tell him how to transcribe, collate, and index the material in the most efficient and economical way. It will also give a first glimpse of the information that such work may yield. A second volume is promised that will delve further into more sophisticated ways of handling and ordering data. In this first essay, hand labour is assumed throughout, but as the argument moves on it is clear that some of the toil could be halved by the use of a computer.

Alan Macfarlane, an historian and social anthropologist, is familiar with the questions, and the materials and methods available to both history and anthropology. For a decade or so he has been collecting documents on two different English communities, Kirkby Lonsdale in Westmorland and Earls Colne in Essex, between 1500 and 1700. He therefore has much experience of reconstructing historical communities, and from this he distills some 200 pages of advice.

The first precept will probably come as a surprise to many students of history, who have learned painfully how to summarize large books in succinct notes. It is imperative to transcribe every document word for word. An unnecessary extravagance, you may think, but Macfarlane is absolutely right. Abbreviations or summaries look innocent enough when first made, but can turn out to be misleading or omit important clues. Sometimes the vital clue is only an interlined word, or a sentence written in another hand. At first reading it can pass unnoticed, yet in the light of other knowledge, it can have the greatest significance. One never knows where the new vistas are going to appear; what complex patterns of economic and social behaviour will emerge when events and people are arranged in a fresh order.

Certain conclusions can be grossly distorted by slight distortions in summary notes. So handwritten transcripts of every document mean hard, prolonged labour. Fortunately, mechanical aids come to the rescue. Xeroxed copies of documents or microfilms save thousands of hours of transcribing and checking, and leave no mistakes at the end. The only deterrent is the expense.

Indexing the material under different headings poses further problems. Macfarlane suggests certain basic indexes, avoiding the indulgence of multiplying catalogues that will not compensate for the time taken to construct them. But when the indexes are ready, the analysis of the material remains a formidable task. It will take 1,500 hours, he reminds us, to reconstitute from parish registers alone those families which endured for 300 years in a parish of 1,000 people. Using all other biographical information in a parish could take one person 20 years. In his quiet, gentle way, Macfarlane helps us to recognize the immense possibilities of reconstructing historical communities (the English documents are abundant and rich in information), and yet he makes it clear that it could take one person 250 years. At the end the book leads us, by its inescapable logic, to one conclusion: the computer should be harnessed.

This handbook is more than a guide to the mechanical collection of basic parish documents, however. It offers fresh observations even to those who have already studied local communities, know the pitfalls, and have devised their own ways of overcoming them. It assesses the quality of different classes of documents: for example, several views of frankpledge lists of people obliged to appear twice a year in the manorial court should record almost all tenants of customary land on a manor, and may even follow an ordered sequence of people, thereby showing where they lived in the village.

Macfarlane's book is plainly an essential item in the baggage of all prospective local historians. But perhaps one word of advice is missing. It is true that not all parishes yield such rich information as the two chosen by Macfarlane; and the best choice has to be carefully made. But no one wishing to study his own village should be deterred by incomplete records. He may have the advantage of taking on a job that does not take 250 years to complete. And it will still prove satisfying and enthralling.

Joan Thirsk

Colour bli...

Carolingian Painting
by Florentine Mütherich
Joachim E. Gaehde
Chatto and Windus, £4.95
ISBN 0 7011 22412

Charlemagne stipulated that ... should be correct, well ... executed with all possible ... Would he have accepted ... and Gaehde's *Carolingian* ... The information it contains ... rect (the dimensions of ... Psalter excepted) and ... detailed: it is more like a ... hibition catalogue than a ... art book.

Mütherich provides an ... tion to the Carolingian ... sance", noting the importance ... books as its vehicle, and ... zing the development of ... script illumination. Gaehde's ... criptions of 25 reproductions ... manuscripts are exceptional ... including provenance, codicological ... and palaeographical information ... and an index of miniatures ... commentaries on the six black-and- ... white and 48 colour illustrations ... deal with iconography and ... as well as style, complementing ... Mütherich's essay. The ... graphy is adequate (38 ... though reticent about ... literature—it would have been ... helpful, for instance, to the ... ler's *Art Bulletin* article ... than his PhD thesis.

Well edited the book ... Mütherich observes that Carolingian ... manuscripts were inscribed ... *authentico libro* if they were ... ful to the exemplar. A comparison ... with the German edition of ... work suggests that the ... version does not deserve ... imprimatur. Gaehde's text ... is fragmented into arbitrary ... tions arranged in a ... order. The black-and-white illustrations ... tions are reproduced ... absurdly tiny scale and ... from the colour plates as ... monochrome were something ... ashamed of. In fact some of ... colour plates, such as those of ... St Emmeram *Codex aureus* ... have been more legible in ... and-white; it is unfortunate ... the meretricious glamour of ... mate colour has been ... Manuscript illuminations ... notoriously difficult to reproduce ... in facsimile. Simulating gold ... the vellum ground are ... problems; they have not ... solved here.

The virtue of these plates ... in their colour but is their ... which has indeed been ... with all possible care. ... reproduced entire, with ... margin showing; sometimes ... facing page is illustrated as ... in every case recto pages appear ... the right, versos on the left ... simple gestures towards the ... format of the miniatures ... element of authenticity absent ... many more expensive publications.

M. W. E...

BOOKS

Moral evil and rational discussion

Ethics, Value, and Reality
by Aurel Kolnai
Athlone Press, £9.00
ISBN 0 485 111 691

Kolnai was an extremely clever and intellectually ingenious man, more imaginative, better read and experienced by life itself in political history, and far better versed in the history of moral and political philosophy, than almost all the members of the analytical school (or philosophy) which he joined." This is the opinion of Professors Bernard Williams and David Wiggins in their memoir which forms the introduction to this book.

Kolnai's name is familiar only to a comparatively small circle and his work to an even smaller one. But some of those who knew him well, like Williams and Wiggins, evidently conceived a great admiration for him. This collection of papers is certainly the work of a formidably well-informed and subtle mind. Whether it is equally impressive as a contribution to contemporary moral philosophy is somewhat less certain.

Kolnai was born in Budapest in 1900 and died in London in 1973. Besides Hungary and England, he spent periods in Austria, France, the United States, and Canada. In the University of Vienna he studied philosophy under Schlick and then became a journalist and writer. During World War II he worked on newspapers in London. His scholarly inclinations never forsook him, however, and he eventually became a professional philosopher at Bedford College, London.

Of Jewish extraction, Kolnai fiercely opposed National Socialism and from 1933 to 1939 was writing against it. He was converted to Roman Catholicism when he was 26, largely under the influence of G. K. Chesterton, whom he read and re-read, and from whom he acquired not only a Christian faith but a capacity to write graceful English. His Christianity was anything but other-worldly, and never Utopian. He considered the view that Nazism was due to economic sanctions absurd, attributing its rise uncompromisingly to demonic evil. Yet he believed as firmly as any liberal that moral evil can be defeated to some degree by rational discussion.

The moral philosophers whom Kolnai most admired were intuitionists such as Ross, Prichard, Carritt and Moore. In their memoir, Williams and Wiggins say that Kolnai's admiration for Moore "bordered upon passion." He certainly believed passionately that "reductionist" accounts of morality were misconceived and he argued the case for this in his paper "Moral Consensus".

The other papers in the collection are as follows. "Erroneous Conscience" discusses the paradox whereby it is right to follow one's conscience even when one's conscience is wrong. "The Sovereignty of the Object" is also about a paradox—that while thought is always somebody's thought, it aims at truth which is not somebody's. Aristotle's view that moral deliberation has to do only with means comes under fire in "Deliberation is of Ends". Two papers on "Morality and Practice" follow in which Kolnai puts forward his own view about the relationship between morality and practical wisdom. Then there is a penetrating discussion of "Existence and Ethics" in which the leading existentialists are considered, followed by one on "The Concept of Hierarchy" in which Kolnai critically examines the axiology of authors such as Hartmann and Scheler, among others. "Aesthetic and Moral Experience", is a scholarly treatment of the differences between the two forms of evaluation. In the course of this paper, Kolnai criticizes prescriptivists for interpreting moral concepts too narrowly: he thinks morality applicable to habit, mere wishes, spontaneous desires, rationality and efficiency, and so on, which cannot be analysed purely in terms of imperatives. Finally there is a paper on the logical possibility of forgiveness.

Those who expect a philosopher to develop his argument clearly, stage by stage, without digression or distraction, will find Kolnai's style hard to take. His sentences abound in subordinate clauses and parentheses. Everything he has to say seems to call into his mind other things from his vast stores of erudition and he cannot resist the temptation to parade them. The end-product is rather like one of those gateaux which have too much jam and cream in them. Palates differ, of course, as to how quickly they cloy but a strong philosophical stomach is needed to digest Kolnai.

This book is for those who have spent some time on modern moral philosophy and have worked out a clear position for themselves. If read slowly and selectively by such people, it will from time to time raise in their minds the question: "Is Kolnai simply muddying the waters or have I been over-simplifying things in order to get them clear?" To raise this question is no small achievement, but one wishes that Kolnai's "passion" for Moore had induced him to think and write with a little of Moore's directness and clarity.

W. D. Hudson

Ethical history

Sidgwick's Ethics and Victorian Moral Philosophy
by J. B. Schneewind
Clarendon Press: Oxford University Press, £17.50
ISBN 0 19 824552 1

Henry Sidgwick was professor of philosophy at Cambridge from 1883 to 1900. His most important work, *The Methods of Ethics*, has always been given high praise by competent judges for acute reasoning, fair-mindedness, and comprehensive scope. Its survey of ethical thinking leads to a version of Utilitarianism more strongly grounded than any that went before—or even (I am inclined to think) that have come after.

A good philosopher knows that his problems are not simple, and one of Sidgwick's virtues is to mark out the complexity of ethics. Unfortunately he did not have the further virtue of describing what is complex in simple or attractive language. His style is involved, cumbrous, and dull. A. N. Whitehead thought *The Methods of Ethics* "so stodgy that he had been deterred from ever reading any book on ethics since". Poor reasoning for a philosopher. It is a fact, however, that many people have been put off from reading the *Methods* itself.

Sidgwick is not hard to understand, but some readers, even among the learned, have found it hard to follow the [illegible] of his thought. There should therefore be a warm welcome for J. B. Schneewind's book, which sets out clearly the general plan and [illegible] of the detail of Sidgwick's argument. It is not an introduction and might be disappointing to someone who had not previously read *The Methods of Ethics*. It is a work of scholarship, intended as a guide for scholars, and very useful they will find it. Schneewind is particularly helpful in explaining the self-evidence that Sidgwick attributed to certain basic "intuitions".

To understand Sidgwick's problems as he saw them, one must know something of the historical context and especially of the moral philosophy that counted at the time. Schneewind writes as a historian of thought and supplements his account of Sidgwick with sketches of earlier and contemporary ethical theories which were influential in Victorian Britain. Some of this information is undoubtedly useful; for example, the survey of Whewell's ethics, which is what Sidgwick had chiefly in mind when he analysed the method of intuitionism. At times, however, the brevity of Schneewind's summaries defeats his purpose.

On Sidgwick himself Schneewind deliberately confines his account to exposition, saying that a satisfactorily critical discussion would need another book. I hope he is now engaged on it. He tells us that Sidgwick, who wrote a most admirable short (yet critical) *History of Ethics*, deplored a purely historical treatment of past philosophers. Sidgwick certainly wanted *The Methods of Ethics* to be read in a critical spirit and to be used as a stepping-stone to further elucidation of the truth. Schneewind should complete the task that he has begun so well.

D. D. Raphael

Words and meaning

Halliday: System and Function in Language
edited by Gunther Kress
Oxford University Press, £7.50 and £5.00
ISBN 0 19 437127 1 and 437062 3

Few linguists know how to frame those questions which a sociologically-oriented theory should be asking about language. From this extremely carefully-selected and well-edited collection of a dozen or so of his essays written over the past 20 years, it becomes clear why it is that Michael Halliday attracts the interest of social scientists and other non-linguists who need an independent, concrete analysis of language on to which and in terms of which they can map their findings and temper their reflections.

His range is immense; he is uncommonly aware of the sounds and intonations of language; his work connects theory with description, and is certainly no dull string of undocumented proposals; he rigorously restricts himself to "the nature of language", without getting involved in psychological or ethnographic matters; his creativeness, within an astonishingly simple yet powerful theory that language is as it is because of what it has to do for its users, is not based on any wizardry with his jargon. For those who find much of transformational grammar either unnecessary or misleading, Halliday's writings are comforting and offer a viable operational alternative. Those who do not know him already will greatly profit from the studies presented here; while those well-acquainted with his approach will find here several unpublished papers alongside others scattered in the traditionally obscure journals, but all woven together as genuine chapters by the editor's judicious commentary and skilful cross-referencing.

And this woven end-product is surely what the subject-matter itself demands. For what is striking about Halliday is this: language is primarily a social activity, therefore inasmuch as the individual in society combines within himself a variety of social roles, so too is the combination of a variety of uses and functions of language crucially embedded within any given stretch of discourse. The analogy is precise and to the point. Halliday expounds each function separately and shows how it makes its way in a text. But in everyday linguistic reality all the functions are there, simultaneously, in spite of their evident disparity and lack of match one with the other; so the definition and significance of grammar is, literally, to systematically weave together these diverse strands into a single fabric that we call linguistic structure. A word, he says, may express one type of meaning, its morphology another and its position in sequence another; and any element may have more than one structural role, like a chord in a fugue which participates in more than one melodic line.

Such ideas obviously had little force when constrained by the mundane arbitrariness of uncoordinated publication: perhaps a sad caricature of his own theory. Here, however, we have it in full, woven together. A fitting tribute, though the title chosen for the collection is no epigram and possibly even evokes Halliday's manifest weakness for technical coinages and nonce-words.

What we are left with, then, is a coherent grammatical framework for the otherwise commonsense but somewhat vague notion that the social functioning of language and the speaker's perception of the world are both reflected in linguistic structure. Halliday acknowledges his intellectual debts: to Whorf, to Malinowski, to Firth; and, with a delightfully whimsical touch, his editor puts in at the foot of the index the references too for Sir Christopher Wren. For indeed in chapter 13 and elsewhere we follow the meditative linguist musing over the wording of a plaque on a gazebo in south London attributed to Wren, as he speculates on how it is that linguistic meaning is a function of language in its context. "Language learning is learning to mean", Halliday tells us: any one of us interested in ourselves as language users is taught in this book how to decipher.

Jonathan Webber

Among this week's reviewers

David Evans is lecturer in law at Reading University and author of The Law of Landlord and Tenant;
Professor Richard Gregory is director of the MRC Brain and Perception Laboratory at Bristol University, and author of several books on perception;
Dr W. D. Hudson is reader in moral philosophy at Exeter University;
Stephen Mennell is lecturer in sociology at Exeter University. He has translated Talcott Parsons and American Sociology by Guy Rocher;
John Miller is lecturer in history at Queen Mary College, London. His book, James II: A Study in Kingship is to be published shortly;
D. D. Raphael is professor of philosophy at Imperial College, London. His latest book is on Hobbes.

Unnecessary apocalypse

Of Grammatology
by Jacques Derrida
translated by G. C. Spivak
Johns Hopkins University Press, £14.65 and £4.45
ISBN 0 8018 1841 9 and 1879 6

In the equation of writing with reading as inexhaustible producers of meaning and in their application to the "real" considered as a display of signifying, Derrida's *De la grammatologie* (1967) was an early polemic. It includes a rebuttal of structuralist assumptions in semiotics—antitheses of signifier and signified in Saussure, of culture and nature in Lévi-Strauss—finding in these the marks of a lingering metaphysics which puts in one hand real presence and in the other the sign.

Instead, Derrida proposes, first, a concept of writing in which the intransitive activity subsumes the transitive (calligraphy, ideogram, print-out); and, secondly, the removal of the contrast which has valued the "fulness" of speech and derided writing as its mere instrument and copy. In place of that we have here in tones that make Isaiah appear shy, a materialist account of language.

It is, argues Derrida, only when all signs are thought of as signs of other signs, traces of another trace, only when the anxiety about origins is forgotten and language is thought as having its source within itself, that the full activity of writing is realized. The name for that activity, *différance* (the display of differing and the play of deferring meanings), announces a number of reversals: writing does not derive from language, but language from writing; speech or the word become subsets of the grapheme or written mark; grammatology absorbs linguistics, and proposes itself as the science of science. Acknowledgments are made to Peirce and Hjelmslev, but the substance of the book is the rereadings of Saussure, Lévi-Strauss, and Rousseau (in that order). Each of these is framed in a contradiction constituted by, on the one hand, the metaphysic their terminologies imply and, on the other, the activity of *différance* which their writing would otherwise announce.

A portion of Derrida's work (notably *Speech and Phenomena*, 1973, and *White Mythology*, NLH 5, 1974) has been translated. Although *Of Grammatology* reaches us 10 years old, its thesis has been popularly available in, for example, Barthes's definition that the essence of writing is to defer forever a reply to the question: who is speaking? Under Derrida's rubric the written subject is to be read as the cipher for an absence which writing and reading perpetually have made and unmade. I will offer examples: "I'm Sharon . . . fly me"; "I am who am." Derrida's own examples ... imply that *distinct* descriptions of such sentences might follow from a grammatology. Indeed his claims for the pleasures of misprints and other vagaries of *écriture* cannot even excuse the proofreading of this volume (e g essense, seperate, imagmation). There are more skilled and varied readings of the play of the subject within apparently simple syntactic forms in, say, Empson's essay "A is B". By comparison and overtly against all theory, Derrida is a literalist restricting the dynamics of a text ["When Rousseau says it 'awakens itself', he means it in a very strictly reflexive sense"].

The sections on Rousseau are nevertheless the most important. The contradictions found in Saussure and Lévi-Strauss are self-evident to the first (hence his recourse to an analogy, of *recto* and *verso*, to illustrate the paradox of the sign), and marginal to the second (whose general accounts of the compositions of myths have little to do with necessarily oral cultures). Here Derrida has little to say. But the study of Rousseau has become as important a chapter in eighteenth-century studies as it is a model of Derrida's theory of interpretation. Moving inward from Rousseau's "peripheral" writings on language and music (which he mistakenly considers to be typical of the age) to the "central" *Confessions*, Derrida opens up from within the texts large areas of uncertainty in conventional assumptions about the author's presentation of the self. Unfortunately, by playing Echo to Narcissus, this translation hinders the results of the enterprise. The most intelligent subsequent commentaries on Derrida/Rousseau by Paul de Man go unacknowledged both in G. C. Spivak's lavishly uncritical introduction and in her translation which accentuates those dispositions—sentimental ("this is perhaps what Nietzche wanted to write"), hieratic ("what is commonly called evil, war, indiscretion, rape; which consists of revealing by effraction the so-called proper name"), and pedantic ("those notes to the *Discours* among which, as we know, the *Essay* was perhaps supposed to be included") that characterize one style of *De la grammatologie*. The other is a style of prophetic incantation ("civilisation . . . disappearing in its very globalisation").

By overplaying Derrida's unnecessary apocalypse this edition ensures that one more original work on the theory of the sign will become marginal to the study of literature, which remains incapacitated without it.

Kevin M. Barry

Classified Advertisements Index

Universities

Applications are invited for the following posts, for which applications close on the dates shown. SALARIES (unless otherwise stated) are as follows: Professor $A31,246; Senior Lecturer $A18,971-$A23,299; Lecturer $A14,851-$A18,551; Further details, conditions of appointment for each post, method of application and application form, where applicable, may be obtained from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

University of New South Wales, Sydney

LECTURER IN FILM STUDIES

SCHOOL OF DRAMA

Academic qualifications in film studies required. The School is chiefly interested in film theory, criticism and aesthetics. Ability to teach in some area of drama would be an advantage.
24 February, 1978.

University of Melbourne

NEW DEVELOPMENT PROGRAMME IN ANTARCTIC STUDIES AND RESOURCES

This new programme is being established as an inter-faculty

phase supports two limited tenure lectureships in the Faculty of Science.

LECTURER (LIMITED TENURE) IN ANTARCTIC GEOPHYSICS

DEPARTMENT OF GEOLOGY

Applications are invited for a geophysicist to establish a research and teaching programme concerned with the structure of the Antarctic continent, its continental shelf and its relation to the Southern Ocean and the Australian Plate. Preference will be given to applicants capable of mounting a marine geophysical programme of the Antarctic continental shelf, but others with specific geophysical programmes which could be mounted on the Antarctic continent will also be given full consideration.

LECTURER (LIMITED TENURE) IN BOTANY

DEPARTMENT OF BOTANY

A lecturer is required to develop a research programme in some aspects of Antarctic Botany involving, for preference, one or another of the following general areas: marine phytoplankton; marine benthic flora, ecology of terrestrial bryophytes and lichen communities; terrestrial phycology. The appointee will also be required to participate in the teaching of appropriate units at undergraduate and postgraduate levels. Preference will be given to applicants with a Ph.D. or equivalent research degree and post-doctoral research experience.
15 March, 1978.

Monash University Melbourne

CHAIR OF PHYSIOLOGY

Applications are invited for a Professor of Physiology to replace Professor A. K. McIntyre, F.A.A., who will retire from the Foundation Chair at the end of 1978. It is expected therefore that the appointee will take up duty early in 1979. Applicants should be physiologists of distinction able to provide leadership and direction in the research and teaching activities of a large department with responsibilities in the Faculties of Medicine and Science. The present strengths in the research and teaching interests of the Department are in neurophysiology, muscle physiology including the physiology of smooth muscle and the autonomic nervous system, endocrinology, renal physiology, circulatory physiology, biophysics and neuropharmacology. There are two establishment Chairs within the Department and a Personal Chair held by Professor M. E. Holman, F.A.A. The successful appointee will have the opportunity to act as Chairman in rotation with the present Chairman, Professor B. Porter, F.A.A., from whom detailed information about the department should be obtained.
31 March, 1978.

CHAIR OF ECONOMETRICS

Applications are invited for one of two chairs in the Department of Econometrics & Operations Research, the other being in Operations Research. The previous holder, Professor A. A. L. Powell retains a part-time affiliation with the Department. organise and take part in undergraduate and take part in undergraduate and graduate teaching in Economic Statistics and Econometrics; graduate programmes lead to M.Admin., M.Ec., and Ph.D. degrees. The appointee will be expected to act as Chairman of the Department, in rotation with the Professor of Operations Research, Professor N. A. J. Hastings. Enquiries of an academic nature should be addressed to Professor Hastings.

Australian National University

SENIOR LECTURER/ LECTURER FACULTY OF LAW (2 POSTS)

One of the posts is to expand the Law Faculty's expertise in the fields of Restrictive Trade Practices, Estate Planning and Taxation, Property or Trusts. The other appointment is for a person with qualifications or experience in International Law. The Faculty is planning to launch an advanced postgraduate teaching programme in International Law in 1978. It is hoped that lawyers from other Australian universities and from departments of the Australian Government will contribute to the programme. The successful candidate would be expected not only to assist in the teaching and administration of the programme, but also to contribute to the Faculty's teaching in some other field of interest.
13 March, 1978.

PAPUA NEW GUINEA
UNIVERSITY OF TECHNOLOGY

Applications are invited for the following positions in its Electrical and Communication Engineering Department:

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(POST AVAILABLE BEGINNING 1979):

The appointee will be required to teach students to degree level, to develop and teach courses for graduate students, to conduct and supervise research in topics relevant to Papua New Guinea and to assist in the administration of the Department.

There is scope for research in broadcasting and telecommunications in relation to the activities of the public utilities or in the area of low cost rural communication systems. Papua New Guinea has a modern S.T.D. system and is considering a satellite television system to start in 1981.

Applicants should have a higher degree and substantial subsequent experience in industry or tertiary education. Teaching experience would be an advantage.

SENIOR LECTURER/LECTURER POWER SYSTEMS ENGINEERING

(POST AVAILABLE NOW, 1978):

Applicants should have a good first degree in electrical engineering, and substantial subsequent experience in the electricity supply industry or the heavy electrical equipment manufacturing industry is also required. A higher degree would be an advantage.

TECHNICAL INSTRUCTOR COMMUNICATION ENGINEERING

(POST AVAILABLE NOW, 1978):

Applications are invited from experienced and qualified people to teach subjects in the Communication Engineering course. The successful applicant would have experience in micro wave systems with emphasis on baseband equipment (telephony and data), transmission, reception, and repeater stations and/or experience in broadcast systems with emphasis on sound studio equipment and HF/MW medium power broadcast transmitters.

The appointee will be required to teach the subject on a diploma in communication engineering course, training students to higher technician level. Applicants should have at least 3 years' experience in installation/maintenance.

TECHNICAL OFFICER (T.O.1—T.O.2.) POWER SYSTEMS/MECHANICAL LABORATORY

(POST AVAILABLE END FEBRUARY 1978):

Duties: Technical staff are engaged in the maintenance and repair of equipment within the Department laboratories, building teaching aids, construction of equipment and assisting with equipment for research projects. The successful applicant will be required to supervise and train national staff working in his area of responsibility. He will be responsible to the teaching staff member in charge of the power systems and machines laboratories and will be responsible for the purchase of equipment for those laboratories with the teaching staff member.

Qualifications: A technical college certificate in electrical engineering or equivalent experience and an electrician's licence (or the ability to obtain one) are required. Considerable experience with a university or technical engineering department is desirable and experience with an electrical contractor would be an advantage.

Please note: This post is not an academic post and does not have study leave benefits as other posts advertised above.

Salaries are paid in kina as follows:

Reader	K17,336
Senior Lecturer	K14,129-K15,841
Lecturer	K10,159-K13,093
Technical Instructor	K 8,943-K 9,918
Technical Officer Grade I-II	K 8,908-K11,866

(1 kina = approx. 0.70p)

Allowances: In addition an allowance of K1,300 (single), K2,300 (married) plus K156 (per child) is payable annually. Conditions of appointment which will be for up to 3 years' period, will also include furnished housing at nominal rental, six weeks leave per year with fare assistance provided, generous education allowance (including fares), for children undergoing secondary education overseas, and superannuation benefits. Study leave after 5 semesters will be given to academic staff only.

Applications, which should be completed in duplicate, should state age, family particulars, qualifications, experience, present post, and the names and addresses of three referees from whom confidential enquiries may be made, and should be directed to the Registrar, The Papua New Guinea University of Technology, P.O. Box 793, Lae, Papua New Guinea.

An additional copy of application should also be sent to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, from whom further information may be obtained.

The closing date for applications is 30 April, 1978.

professor of the history of ancient philosophy

The Central Interfaculty (Department of Philosophy) of the Catholic University of Nijmegen, the Netherlands, intends to appoint a full professor to the vacant chair of the history of ancient philosophy. The successful candidate must undertake the following duties:
1. teach undergraduate ('pre-kandidaats-') and graduate ('doctoraal-') students, especially those who have chosen to major in the history of philosophy and those who read in the Department of Classics,
2. undertake and supervise research within his field,
3. do work in the areas of organisation and administration.
The successful candidate must be a philosopher and a classical scholar. Familiarity with modern and contemporary philosophy and specialisation in ancient philosophy are essential.
Requirements also include good philological and general historical schooling.
Candidates will be asked to acquire fluency in dutch within two years of appointment. Applications within three weeks of this notice to: The Chairman of the Appointments Committee: prof.dr. J.Hollak, Filosofisch Instituut, Erasmuslaan 40, Nijmegen - Netherlands.

katholieke universiteit nijmegen the netherlands

BIRMINGHAM

UNIVERSITY OF ASTON

DEPARTMENT OF MODERN LANGUAGES

Applications are invited for posts of temporary TUTORS of ENGLISH as a FOREIGN LANGUAGE on English and Study Skills Courses 13 August to 30 September, 1978, or 31 August to 30 September, 1978.

Salary minimum £120 a full week (currently under review).

Further particulars may be obtained from the Staff Officer, University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET, quoting reference number 282/1881 to whom curriculum vitae and names of two referees should be addressed as soon as possible.

CANADA

UNIVERSITY OF ALBERTA

DEPARTMENT OF CLASSICS

Applications are invited from both men and women for a possible position at the ASSISTANT PROFESSOR level (minimum $17,625) who should be a specialist in GREEK and ROMAN ART with some interest in archaeology and competence in Greek and Latin. Ph.D. and some teaching experience preferred; publications expected. Formal applications and letters from three referees must be posted two weeks from this date for assured consideration.

Apply to Dr R. O. Smith, Chairman, Department of Classics, University of Alberta, Edmonton, Alberta, Canada T6G 2E5.

ABERDEEN

THE UNIVERSITY

CHAIR OF CHURCH HISTORY

Applications are invited for the above chair vacant since the retirement of Professor J. S. McEwen.

Further particulars from the Secretary, The University, Aberdeen, with whom applications (2 copies) should be lodged by March 10, 1978.

BIRMINGHAM

THE UNIVERSITY

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

Applications are invited for a LECTURESHIP in MODERN ENGLISH LANGUAGE from 1 October, 1978.

Salary on lower part of scale £3,333 to £6,655 (under review), with superannuation.

Applications, naming three referees, should be sent by 3 March, 1978, to Assistant Registrar (Arts), University of Birmingham, P.O. Box 363, Birmingham B15 2TT, from whom further particulars may be obtained.

BRISTOL

THE UNIVERSITY

DEPARTMENT OF GEOGRAPHY

APPLICATIONS are invited for a TEMPORARY [illegible] ... [illegible]

Salary will be [illegible] range £3,333 to [illegible] per annum

Further particulars [illegible] ... [illegible]

Universities continued

UNIVERSITY OF CAPE TOWN

FACULTY OF MUSIC

SENIOR LECTURER IN MUSIC (VIOLIN)

Applications are invited for this post in the College of Music, currently vacant. Appointment, according to qualifications and experience, will be made on the salary scale R8,460 x R350—R9,900 x R450—R11,250 per annum, plus a pensionable allowance of 10 per cent of basic salary.

Applicants should be concert violinists, currently performing and must have had teaching experience at the tertiary level.

The successful applicant will be required to organise the work of the string section. He will be required to teach violin playing to students individually, and to oversee the training of young pupils in groups. He will also be required to lecture on teaching method and repertoire of the violin, and to coach student groups in chamber music. Apart from solo, string quartet and general chamber music performing the successful applicant will, among other things, be required to train the string orchestra and lead the University orchestra.

Applicants should submit a curriculum vitae, stating present salary, when available if appointed, and the names and addresses of three referees.

Memoranda concerning the position and general conditions of service should be obtained from the Registrar, Room 1, University of Cape Town, Private Bag, Rondebosch 7700, by whom applications must be received not later than 31st March, 1978.

UNIVERSITY OF NATAL

Department of Civil Engineering, Durban

Applications are invited from suitably qualified persons for appointment to the post of

SENIOR LECTURER

The salary scale attached to the post is: R8,820 x 380-R9,900 x 450-R11,250 plus a 10 per cent pensionable allowance per annum.

The commencing salary notch will be dependent on the qualifications and/or experience of the successful applicant. In addition, an annual vacation savings bonus is payable, subject to Treasury regulations.

The policy of the University is that all persons, regardless of sex, religion, race, colour or national origin, are eligible for appointment.

Application forms, and conditions of service, including details of fringe benefits, are obtainable from the Registrar, University of Natal, King George V Avenue, Durban, with whom applications, on the prescribed form, must be lodged not later than 30th April, 1978, quoting reference ADV. D.10/78.

Coláiste na hollscoile Corcaigh

UNIVERSITY COLLEGE CORK

Full-time Appointment in Welsh

The Governing Body invites applications for a full-time post as

Assistant Lecturer College Lecturer in Welsh

In the Department of Early and Medieval Irish Language and Literature. The appointment will be made at one of the levels mentioned according to the qualifications and experience of the successful candidate.

The salary scales are:
College Lecturer £5,155 to £6,121 (bar) £6,141 to £7,430 p.a.
Assistant Lecturer £4,403 to £4,805 p.a.

Application form and further details of the post may be obtained from the undersigned.

Latest date for receipt of applications is Friday, 3 March, 1978.

M. F. Kelleher, Secretary

JAMES COOK UNIVERSITY OF NORTH QUEENSLAND

CAREERS AND APPOINTMENTS OFFICER

The University wishes to appoint an officer to develop the newly created Careers and Appointments Section. Applicants should have a degree and appropriate experience in careers counselling. Postgraduate qualifications and/or experience in commerce or industry would be an advantage.

The appointee will be required to provide a careers and placement service for students, to consult with employers on employment opportunities and to assist in the promotion of careers education. Some research into the various aspects of graduate employment may also be required. Appointment will be at the level of administrative officer group 6, 7 or 8, depending on qualifications and experience. The salary ranges are:
Administrative Officer Group 6 $A15,390-$A15,888 p.a.
Administrative Officer Group 7 $A16,347-$A16,855 p.a.
Administrative Officer Group 8 $A17,158-$A17,366 p.a.

Conditions of appointment include 6 weeks' recreation leave, assistance with removal and travel on appointment, superannuation and sick leave privileges.

Further information and application forms are available from the Registrar, Post Office, James Cook University 4814, Queensland, Australia, with whom applications close on 17 March 1978.

BIRMINGHAM

THE UNIVERSITY

FACULTY OF LAW

Applications are invited for one or two LECTURESHIPS in LAW from 1st October, 1978 or as soon as possible thereafter. Salary £3,333 to £6,655 (under review), with superannuation benefits.

Further particulars and an application form can be obtained from the Administrative Assistant, Faculty of Law, University of Birmingham, P.O. Box 363, Birmingham B15 2TT.

Application forms should be returned not later than 17th March 1978. Please quote ref: 70/71L.

BRISTOL

THE UNIVERSITY

DEPARTMENT OF THEOLOGY AND RELIGIOUS STUDIES

SESSION 1978-79

DIPLOMA IN THEOLOGY (1978-79)

Applications are invited for the above one-year postgraduate course. Its intention is to permit graduates in subjects other than Theology to undertake a "conversion" course at graduate level of study so that they are sufficiently equipped to do further study in the theological field. Courses may be taken in Biblical Studies, Religious History and Theology, The Philosophy of Religion and Morals, or the Study of Religion. Examination is by written papers and an extended essay.

Qualification: Honours Degree or its equivalent in any subject other than Theology. Last date for applications: 30th June, 1978.

UNIVERSITY COLLEGE CORK

Department of Archaeology—Full-time Appointment(s)

The Governing Body invites applications for two full time posts as

Assistant Lecturer **College Lecturer**

in the Department of Archaeology. The appointments will be made at one of the levels mentioned according to the qualifications and experience of the successful candidates.

The salary scales are:
College Lecturer £5,115 to £6,121 (bar) £6,141 to £7,430 p.a.
Assistant Lecturer £4,403 to £4,805 p.a.

Application form and further details of the post may be obtained from the undersigned.

Latest date for receipt of applications is Friday, 3 March, 1978.

M. F. Kelleher, Secretary

UNIVERSITY OF LANCASTER

ULTRA-SENSITIVE MECHANICAL MEASUREMENTS ON METAL SURFACES IN THE DEPARTMENT OF PHYSICS

Applications are invited for the post of Research Associate to work under the direction of Dr H. M. Pollock on contact adhesion between solids, using equipment described in J Phys D 10, 127 (1977). The work is linked to the research programme of A E R E (Harwell) on wear-resistance of ion-implanted metals, and with work at the C N R S Laboratoire de Mécanique des Solides, Meudon, Paris. The post is for three years and is financed by the Science Research Council.

Applicants should preferably have experience in research involving delicate manipulation, and a Ph.D. in some aspect of surface physics, metallurgy or mechanical engineering. Salary scale: £3,333 to £4,403 (under review).

Further particulars may be obtained, quoting reference L24, from the Establishment Officer, University House, University of Lancaster, Lancaster LA1 4YW, to whom applications (five copies), naming three referees, should be sent not later than 9th March, 1978.

UNIVERSITY OF MALAWI— THE POLYTECHNIC

Applications are invited for the following posts in the DEPARTMENT OF ENGINEERING:

1. SENIOR LECTURER/ LECTURER IN MECHANICAL ENGINEERING

2. SENIOR LECTURER/ LECTURER IN ELECTRICAL ENGINEERING (2 posts)

3. LECTURER IN SURVEYING

4. LECTURER IN BUILDING CONSTRUCTION

5. LECTURER IN MECHANICAL ENGINEERING/TECHNICAL TEACHING

Applicants must have at least a good honours degree in the appropriate subject from a recognised institution or equivalent professional qualification and at least five years of industrial experience. Previous teaching and experience in a developing country would be an advantage at lecturer level and essential at senior lecturer level. Appointees will be required to teach up to the diploma level and assist in developing a degree programme in engineering. Salary scales: Senior Lecturer K6,500-K8,000 p.a., Lecturer K3,600-K6,600 p.a. (£1 sterling equals K1.67). The British Government may supplement salaries in range £3,459-£4,176 p.a. (sterling) for married appointees and £2,184-£2,862 p.a. (sterling) for single appointees (reviewed annually and normally free of all tax) and provide children's education allowances and holiday visit passages. If no British Government Supplement available, the University may pay an addition of between K1,320-K1,656 p.a. for Lecturer and between K1,840-K1,690 p.a. for Senior Lecturer (taxable in Malawi). Family passages; superannuation scheme: gratuity 15 per cent to 25 per cent; biennial overseas leave; housing and various allowances.

Detailed applications (2 copies) with curriculum vitae and naming 3 referees to be sent to Registrar, University of Malawi, P.O. Box 278, Zomba, Malawi, by 1 March 1978. Applicants resident in the U.K. should send one copy to Inter University Council, 90/91 Tottenham Court Road, London W1P 0DT.

Further details can be obtained from either address.

UNIVERSITY OF ZAMBIA

Applications are invited for the post of

PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER/LECTURER IN THE DEPARTMENT OF PSYCHOLOGY

Applications are sought with a specialization in Industrial/Organisational Psychology, able to teach at undergraduate level in one or two other areas of basic Psychology (e.g. General Experimental, Comparative/Physiological, Quantitative Methods/Assessment, Social, Personality). They must possess a postgraduate degree from a recognised University; teaching and research experience would be an advantage. Duties will include lecturing to students pursuing courses leading to the Bachelor's Degree, as well as some lecturing and supervision of students of the postgraduate level. Research facilities exist and research is encouraged. The Psychology Department enjoys good relationship with several applied industrial psychology units in the country affording adequate opportunity for the pursuit of professional concerns. Salary scale: Professor K8,232-K8,616 p.a.; Associate Professor K7,812-K8,232 p.a.; Senior Lecturer K6,324-K7,200 p.a.; Lecturer K4,248-K6,108 p.a. (£1 sterling equals K1.42). The British Government may supplement salaries in range £2,220-£4,062 p.a. (sterling) for married appointee or £330-£1,844 p.a. (sterling) for single appointee (reviewed annually and normally free of all tax) and provide children's education allowances and holiday visit passages. Family passages; baggage allowance; superannuation and medical aid schemes; regular overseas leave.

Detailed applications (2 copies) and curriculum vitae, and naming 3 referees to be sent to Registrar, University of Zambia, P.O. Box 2379, Lusaka, Zambia, by 28 February, 1978. Applicants resident in U.K. should send one copy to Inter University Council, 90/91 Tottenham Court Road, London W1P 0DT.

Further details may be obtained from either address.

TUFTS UNIVERSITY

Medford, Massachusetts

Applications are invited for the post of

DIRECTOR OF TUFTS IN LONDON

an Aug.-May academic programme for third-year American university students.

Applicants must have a knowledge and understanding of the Arts, especially Drama, of English Literature and the Social Sciences. Candidates must have an advanced degree from an accredited British or American university and some familiarity with American university procedures and American higher education. Salary paid in American dollars to be negotiated, minimum $12,000. Please send curriculum vitae to Dr. Sherwood Collins, 41-42 Stanhope Gardens, London SW7. Closing date, February 20.

CANADA

CONCORDIA UNIVERSITY

Applications are invited for two positions. One for a person with a Doctorate in Social Foundations of Education and the other for a person with qualifications and research interests in one or more of Learning and Instructional Design; Development and Evaluation of Educational Materials (e.g., Television, Film, Computer-based Systems, Educational Games); Experimental Analysis of Educational Behaviour; Educational Systems Analysis and Planning; Theory of the Moving Image.

Rank and salary negotiable.

Please send curriculum vitae together with names of three referees immediately to: Dr. J. Bhatnagar, Chairman, Department of Education, Concordia University, 1455 de Maisonneuve Boulevard West, Montreal, Quebec, H3G 1M8.

UNIVERSITY OF ZAMBIA

Applications are invited for 5 posts in the

DEPARTMENT OF POLITICAL AND ADMINISTRATIVE STUDIES

POLITICAL SCIENCE 2 POSTS. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER. Preference will be given to candidates specialised in any or more of the following: Political Theory, Comparative Politics and Political Behaviour and International Politics.

PUBLIC ADMINISTRATION 3 POSTS. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER. Applicants should be specialized in any or more of the following: Public Financial Management, Local Government Administration, Comparative Administration, Administrative Theory, Personnel Administration, Programme Evaluation, & Public Policy Analysis.

Salary scales: Professor K8,232-K8,616 p.a.; Associate Professor K7,812-K8,232 p.a.; Senior Lecturer K6,324-K7,200 p.a. (£1 sterling equals K1.42). The British Government may supplement salaries for posts in the Department of Public Administration in range £3,234-£4,062 p.a. (sterling) for married appointees and £996-£1,644 p.a. (sterling) for single appointees (reviewed annually and normally free of all tax) and provide children's education allowances and holiday visit passages. They are unlikely to provide salary supplementation and associated benefits for appointees in the Department of Political Science. Family passages; baggage allowance; superannuation and medical aid schemes; regular overseas leave.

Detailed applications (2 copies) plus curriculum vitae and naming 3 referees to be sent to Registrar, University of Zambia, P.O. Box 2379, Lusaka, Zambia, by 28th February, 1978. Applicants resident in U.K. should also send 1 copy to Inter University Council, 90/91 Tottenham Court Road, London W1P 0DT.

Further particulars may be obtained from either address.

NATIONAL UNIVERSITY OF LESOTHO

Applications are invited for the post of

PROFESSOR AND HEAD OF THE DEPARTMENT OF CHEMISTRY

Consideration will be given to applicants with specialization in any branch but the present staff will best be complemented by a physical-organic chemist. Candidates should preferably have an interest in undergraduate teaching as well as in research. The appointee will be expected to assume duties by August, 1978. Appointment will be on renewable short-term contract. Salary scale: Professor R8,580-R9,900 (£1 sterling = R1.59). The British Government may supplement salary by £3,456 p.a. (sterling) for married appointee and £2,274 p.a. (sterling) for single appointee (reviewed annually and normally free of all tax) and provide children's education allowances and holiday visit passages. Superannuation: Non-contributory for appointees on permanent terms of service. Appointees on short contract terms receive 25 per cent gratuity in lieu of superannuation for the first two years of the contract, rising to 27½ per cent and 30 per cent for each subsequent and similar period of service. 15 per cent inducement allowance for expatriates not qualifying for any supplementation scheme. Family passages; baggage allowance; reasonable rental for accommodation; education allowance for expatriates; vacation and study leave.

Detailed applications (2 copies) to be sent with curriculum vitae together with names and addresses of 3 referees to Registrar (Appointments) National University of Lesotho, Roma Lesotho, by 1 March, 1978. Applicants resident in U.K. should send one copy to Inter University Council, 90/91 Tottenham Court Road, London W1P 0DT.

Further details may be obtained from either address.

LEEDS

THE UNIVERSITY

DEPARTMENT OF MICROBIOLOGY

Applications are invited from Medical GRADUATES for the post of LECTURER in the DEPARTMENT of MICROBIOLOGY. It is hoped that the successful applicant will be eligible for an Honorary Consultant Contract with the Leeds Area Health Authority (Teaching).

Salary will be either on the clinical lecturer scale £3,742 to £7,440 (plus £312 supplement) (under review) or on the scale for lecturers with Honorary Consultant Contract £7,535 (plus £312 and £208 supplements), £8,323 (plus £170 and £208 supplements), £9,111 to £10,689 (plus £201 supplements). The Department may be visited by arrangement with Professor E. Mary Cooke (Leeds 34171 ext. 41).

Application forms and further particulars may be obtained from the Registrar, The University, Leeds LS2 9JT, quoting reference number 96/7/D. Closing date for applications 10 March 1978.

UNIVERSITY OF MALAWI

THE POLYTECHNIC

Applications are invited for the post of

LECTURER IN ENGLISH/ LIBERAL STUDIES, DEPARTMENT OF ENGLISH AND LIBERAL STUDIES

Applicants must have at least a good honours degree and a teaching qualification. A qualification and experience in the teaching of English as a second language would be an advantage. Teaching experience of both liberal studies and communication skills in institutions of further or higher education are essential. The appointee will be required to teach mainly liberal studies to a variety of diploma classes and to assist in the development of this aspect of the Department's work throughout the Polytechnic. Salary: K 3,500 to K6,600 p.a. (£1 sterling equals K1.67). The British Government may supplement salaries in range £3,459-£3,864 p.a. (sterling) for married appointee or £2,184-£2,568 p.a. (sterling) for single appointee (reviewed annually and normally free of all tax) and provide children's education allowances and holiday visit passages. If no British Government supplement available, the University may pay an addition of between K1,320-K1,656 p.a. (taxable in Malawi). Family passages, superannuation scheme, gratuity 15 per cent-25 per cent, biennial overseas leave, housing and various allowances.

Detailed applications (2 copies) with curriculum vitae and naming 3 referees to be sent to Registrar, University of Malawi, P.O. Box 278, Zomba, Malawi, by 1 March, 1978. Applicants resident in the U.K. should send one copy to Inter University Council, 90/91 Tottenham Court Road, London W1P 0DT.

Further details may be obtained from either address.

UNIVERSITY COLLEGE OF SWAZILAND

Applications are invited for the post of

LECTURER IN THE DEPARTMENT OF ENGLISH

Candidates should possess at least an M.A. (or the equivalent) and should have had experience (preferably in Africa) in the teaching of English as a second or foreign language (TESL/TEFL). The appointee will be required to teach primarily first-year English language. Salary scales: E5,733-E7,158 p.a. (£1 sterling = E1.67). The British Government may supplement salary in range £1,050-£1,608 p.a. (sterling) for married appointee or £NIL-£252 p.a. (sterling) for single appointee (reviewed annually and normally free of all tax) and provide children's educational allowances and holiday visit passages. Short-term contracts for two or four years for expatriates. If appointment is for a limited period, a 25 per cent gratuity is paid in lieu of superannuation for the first two years of service; 27½ per cent for the second two years. A 10 per cent inducement allowance is payable to expatriates not qualifying for supplementation from other sources. Family passages; education allowances; outfit aid scheme; accommodation at reasonable rental and biennial leave.

Detailed applications (2 copies) including curriculum vitae and naming 3 referees to be sent to Registrar, University College of Swaziland, Private Bag, Kwaluseni, Swaziland, by 1 March, 1978. Applicants resident in UK should send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT.

Further details may be obtained from either address.

UNIVERSITY OF SYDNEY

Postdoctoral Research Fellowships

Applications are invited for the above-mentioned awards from candidates who hold a Ph.D. degree or have research publications revealing equivalent status.

The Fellowships are not intended for persons who are in, or have occupied, a career position since being awarded the Ph.D.

The Fellowships, which are tenable in any field, are valued at between $A12,872 and $A14,286 p.a. and provide return fares. They are tenable for one year with the possibility of renewal for a second year.

Further information is available from the Registrar, University of Sydney, NSW 2006, Australia, with whom applications close on May 1, 1978.

KENYATTA UNIVERSITY COLLEGE—KENYA

SENIOR LECTURER/LECTURER IN THE ZOOLOGY DEPARTMENT

UNIVERSITY OF STRATHCLYDE

SHEFFIELD

HULL

HULL

CANTERBURY

CHANFIELD

DURHAM

DURHAM

ESSEX

GLASGOW

HULL

LANCASTER

LEEDS

LEEDS

NORWICH

NOTTINGHAM

LONDON, W.C.2

LONDON

LONDON

LONDON

MANCHESTER

OXFORD

OXFORD

OXFORD

THE OPEN UNIVERSITY

THE OPEN UNIVERSITY

WARWICK

STIRLING

Universities continued

SOUTHAMPTON

SHEFFIELD

READING

READING

READING

RHODES

Fellowships and Studentships

BRITISH FILM INSTITUTE

RESEARCH FELLOWSHIP

Applications are invited for a one-year Research Fellowship to be concerned with governmental cultural policy with regard to film. The post will be based at Goldsmiths' College, University of London.

The salary will be £4,073.

Applications should be received not later than 24th February, 1978, and further particulars may be obtained from the Educational Advisory Service, British Film Institute, 127 Charing Cross Road, London WC2H 0EA.

NEWCASTLE UPON TYNE

THE UNIVERSITY

SIR SADLER FORSTER FELLOWSHIP IN REGIONAL DEVELOPMENT STUDIES

STIRLING

RESEARCH FELLOWSHIPS FOR NURSES

The Department of Health and Social Security, through its research and development funds, is offering fellowships for nurses in the 1978-79 session. Applications are invited from:

1. NURSE GRADUATES

with considerable experience following training and who have obtained acceptance (or whose application is under consideration) at a University or Polytechnic in England or Wales to carry out research on some aspect of nursing for a higher degree.

2. NON-GRADUATE NURSES

with considerable experience following training and with qualifications accepted (or under consideration) by a University or Polytechnic as meeting requirements for registration for a Master's degree. A substantial part of the course should be concerned with theories and methods of research and include an individual research project.

Further particulars and application forms are available from the Nursing Officer (Research) Room A317, Department of Health and Social Security, Alexander Fleming House, Elephant and Castle, London SE1 6BY, to whom completed application forms should be returned by Friday, 7 April, 1978.

Polytechnics

The Polytechnic of Wales

Politechnig Cymru

The Governors invite applications for the post of

DIRECTOR

which becomes vacant on 1st September 1978

The Polytechnic of Wales is a comprehensive institution of higher education which operates in accordance with an Instrument and Articles of Government made by the Mid Glamorgan Education Authority and approved by the Secretary of State for Education and Science.

The Director is the chief officer of the Polytechnic and has responsibility under the general direction of the Governing Body of which the Director is a member ex officio for the organisation, management and conduct of the Polytechnic.

The Polytechnic is currently placed in and salary is payable in accordance with the lower end of Group 11 of the Burnham Further Education Report.

Further particulars of the post, including a copy of the Instrument and Articles and details of the procedure for the submission of applications may be obtained from the Secretary & Clerk to the Governors, The Polytechnic of Wales, Pontypridd, Mid Glamorgan.

The closing date for receipt of applications is Friday, 10th March 1978.

The Polytechnic of Wales

LECTURER GRADE II/ SENIOR LECTURER

ORGANISATIONAL BEHAVIOUR

£3,279-£6,656 (Bar)-£6,417 p.a.

Plus supplements of £462

Applicants should possess a good honours degree in a social science discipline or a higher degree with a specialisation in the field of organisation theory, industrial sociology or an allied subject area.

Further details and form of application from The Chief Administrative Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Closing date 27th February, 1978.

TRENT POLYTECHNIC NOTTINGHAM

ULSTER COLLEGE

THE NORTHERN IRELAND POLYTECHNIC

Faculty of Business Administration

Due to the commencement of two new postgraduate accounting diplomas in September 1978 and expansion of existing courses additional staff are required to join the accounting and finance team.

Reader—Accounting

Applicants should have an Honours Degree and/or be a ACA/ACCA/ACMA/IPFA/ACIS with a proven research and/or publications record.

A post graduate qualification would be an advantage.

Lecturer II or I—Financial Accounting

Applicants should have an Honours Degree and/or be a ACCA/ACA/ACMA/IPFA/ACIS with an enthusiasm for teaching.

Lecturer II or I—Business Finance

Applicants should have an Honours Degree and/or be a ACCA/ACA/ACMA/IPFA/ACIS with an enthusiasm for teaching.

Temporary Lecturer II or Senior Lecturer—Business Finance

A temporary one year post is immediately available. Applicants should have an Honours Degree or be a qualified ACCA/ACA/ACMA/IPFA/ACIS with an enthusiasm for teaching and/or research.

An appropriate post graduate qualification would be an advantage.

Faculty of Technology

Lecturer II Building Technology

Applications are invited from graduates with appropriate professional experience to teach on HND and HNC courses and assist in the preparation of a degree course in Building. An interest in Building Science or Building Services and applied building research is desirable.

Since the inception of the Polytechnic in 1971 the student population has grown to over 7,100. The main buildings are situated on a 114 acre site overlooking the sea at Jordanstown. There is a scheme of assistance with removal.

Salary:	Reader	£6,432-£8,070
	Senior Lecturer	£5,523-£6,447/6909
	Lecturer II	£3,744-£5,885
	Lecturer I	£2,913-£4,866

Further particulars and application forms which must be returned by February 20th may be obtained by telephoning Whiteabbey (0231) 65131 ext. 2243 or by writing to: The Establishment Officer, Ulster College, The Northern Ireland Polytechnic, Shore Road, Newtownabbey, Co. Antrim BT37 0QB.

KINGSTON POLYTECHNIC

School of Business

Applications are invited from suitably qualified persons for the following posts:

PRINCIPAL LECTURER in BUSINESS ORGANISATION and SYSTEMS

To lead a team of staff engaged in teaching and research related to a wide range of courses from sub-degree to masters level. Applicants should hold a masters degree or Ph.D. in Business Administration.

LECTURER II/SENIOR LECTURER in ACCOUNTANCY

To join a team of staff engaged in teaching and research related to a wide range of courses from sub-degree to masters level. Candidates for appointment at Lecturer II should be graduates or be members of a professional accounting body of high standing. Candidates for appointment at Senior Lecturer level should preferably hold a relevant masters degree.

Salaries within the following ranges to include the '76 and '77 supplements: Principal Lecturer: £6,432-£7,134 (bar)-£8,070.

Lecturer II/Senior Lecturer: £3,744-£6,909. (All salaries plus London allowance £297.)

Further details and application forms (to be returned by 24 February) from the Academic Registry Dept. AO, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames KT1 2EE. 01-549 1366.

Assistant Administrator

Humanities, Enfield

£4,161 - £4,507 pa inc.

Could you take on the day-to-day management of the administrative services and the non-teaching staff of the Polytechnic's Humanities resource centre? Your responsibilities would include:—

- the administration of a complex modular degree course, including examination arrangements.
- the operation of short courses in humanities.
- secretaryship of an important sub-committee.

You should be of graduate status and have some relevant experience of academic or public administration.

Please write for full details and an application form, posting first class to: Appointments Officer (Ref. 79.98), Middlesex Polytechnic, Bounds Green Road N11 2NQ, to whom completed forms must be returned by February 20.

Middlesex Polytechnic

Thames Polytechnic

School of Architecture and Landscape

LANDSCAPE ARCHITECTURE

Applications are invited for the following full-time appointments:

PRINCIPAL LECTURER (from 1 June, 1978)

SENIOR LECTURER (from 1 April, 1978)

A landscape architect, preferably a graduate with teaching and professional experience to take charge of a senior year studio (full and part-time students) and offer courses in landscape planning and other appropriate fields of study.

Further particulars and form of application may be obtained from the Staffing Officer, Thames Polytechnic, Wellington Street, London, SE18 6PF, to whom completed applications should be returned by 28 February, 1978.

Applications are also invited for

PART-TIME VISITING TUTORS

from October, 1978.

Current rate: £5.98 per hour. Landscape architects and/or designers to teach design in the studios and bring their recent professional experience to bear. Appointments over 10, 20 or 30 weeks preferably for periods of at least one day and evening per week by arrangement.

Contact Dr. J. Paul, Head of School, Thames Polytechnic, Vencourt House, King Street, Hammersmith, W.6. (01-748 6053 extension 271.)

Senior Lecturer Principal Lecturer in Social Work

£5,820-£8,367 p.a. incl.

Applications are sought from graduate social workers with substantial field and teaching experience.

For appointment at the PL level candidates should have had degree teaching experience and be able to demonstrate ability to initiate and conduct research.

Please write for full details and an application form, posting first class to: Appointments Officer (Ref. A469A), Middlesex Polytechnic, Bounds Green Road, London N11 2NQ. Closing date: February 24.

Middlesex Polytechnic

CITY OF BIRMINGHAM POLYTECHNIC

DEPARTMENT OF BUSINESS AND MANAGEMENT STUDIES

LECTURER II IN MARKETING

Required to join a team teaching on degree, diploma and professional courses. A special interest in behavioural aspects of marketing is desirable. The person appointed will have the opportunity to contribute to course development.

Salary scale: Lecturer II £3,744-£5,985 including 1976 and 1977 salary awards.

Further details and application forms (to be returned by the 24th February, 1978) from: The Personnel Officer, City of Birmingham Polytechnic (THES), F Block, Perry Barr, Birmingham B42 2SU.

Polytechnics continued

The following posts are currently available for application :—

Faculty of Business—Barking Precinct

Lecturer Grade II (Faculty post)

To assist in the development of part-time educational programmes. An appropriate degree or qualification and work experience in the general fields of business or management is required. An interest in audio-visual learning systems would be an advantage. (Ref. S/AO311A)

Department of Accounting and Finance

Lecturer II/Senior Lecturer in Accounting

To teach on degree and professional courses and who is able to contribute to this teaching at advanced level. A professional accounting qualification and a first or higher degree are desirable. (Ref. S/AO311B)

Department of Business Studies

Lecturer II/Senior Lecturer in Accounting

To teach Accounting at all levels up to and including final degree. Ability to contribute to part-time course development would be an advantage. Applicants must be qualified Accountants and for appointments at SL level teaching experience will be required. (Ref. S/AO311C)

Department of Law

Lecturer II in Law

To assist in the development of the B A (Honours) Law degree and other multi-disciplinary courses. A special interest in Administrative Law and/or Business Law is desirable. (Ref. S/AO311D)

Faculty of Engineering—Barking Precinct
Department of Chemical Engineering

Lecturer II

To teach principally undergraduate students. Applicants should hold a good honours degree in Chemical Engineering and preferably have several years of appropriate industrial experience. Encouragement and facilities are given for research and industrial collaboration. (Ref. S/AO311E)

Faculty of Humanities—Barking Precinct
School of Education and Humanities

Lecturer II/Senior Lecturer in Related Studies

To be employed to work on Related Studies Programmes, in particular with Environmental Studies students. Applicants should be graduates with an honours degree in geography or environmental studies and have relevant research and teaching experience. (Ref S/AO311F)

Faculty of Environmental Studies—Waltham Forest
Department of Civil Engineering

Principal Lecturer

To teach and research in Water Engineering. Applicants should be graduate chartered civil engineers and preferably possess a higher degree in the relevant field. (Ref. S/AO311G)

Faculty of Science—West Ham Precinct
Department of Paramedical Sciences—Division of Physiology/Pharmacology

Lecturer II/Senior Lecturer in Pharmacology

To teach pharmacology on courses in B.Sc. Applied Biology, M.Sc. Pharmacology and HNC/D Applied Biology. A special interest in the Central Nervous System would be an advantage. Candidates should have an appropriate first degree and either relevant research, teaching or industrial experience. A Higher Degree is desirable. (Ref S/AO311H)

Student Services

Dean of Students—Head of Department Grade VI

To have general responsibility for student matters as a whole. Candidates must have substantial experience in higher education and be aware of current trends in student affairs. (Ref S/AO311J)

Salary scales: Lecturer II, £3,279-£5,493.
Senior Lecturer, £5,031-£6,417.
Principal Lecturer, £5,940-£7,578.
Head of Department, Grade VI, £8,037-£8,913.
(Plus appropriate Government Supplements of up to a maximum of £482 and appropriate London Allowance.)

Further details and application form from : The Senior Academic Personnel Officer (2), North East London Polytechnic, Forest Road, London E17 4JB. Telephone : 01-527 2272 extension 20. Closing date : 24th February, 1978.

NELP North East London Polytechnic

Senior Lecturer/ Lecturer 2 in Computing

Research or recent industrial experience and interest in programming languages is required.
Salary : Senior Lecturer £5,523-£6,909. Lecturer 2 £3,741-£5,985.
Application forms and further details from the Personnel Officer, Brighton Polytechnic, Moulsecoomb, Brighton BN2 4GJ. Tel. : 0273 693655, ext. 2537.
Closing date, 26th February.

SHEFFIELD CITY POLYTECHNIC

FACULTY OF BUSINESS AND MANAGEMENT STUDIES

Applications are invited for the posts of

SENIOR LECTURER LECTURER II IN

A. FINANCIAL CONTROL SYSTEMS

B. PRODUCTION and MARKETING ECONOMICS

Salary Scale : Senior Lecturer : £5,523-£6,117 (bar) £6,909. Lecturer II: £3,741-£5,985.

Both posts are within the Department of Hotel and Catering Studies and Home Economics. They involve the application of financial control and economic principles to, respectively, the catering and food processing industries and related activities. Research in these areas is strongly encouraged.

For Post A applicants should have experience of mechanical and electronic control systems, and of computer systems analysis and programming, together with either membership of a recognized accountancy institute or a degree in Business Studies with an appropriate option.

For Post B applicants should have commercial or industrial experience, a first degree in economics and, preferably, a relevant higher degree.

Requests for an application form in writing only, please, to the Personnel Department, Sheffield City Polytechnic, Halfords House, Fitzalan Square, Sheffield S1 2BB, to where completed forms should be returned by February 24, 1978. Please quote ref. THES.

THE POLYTECHNIC HUDDERSFIELD

Department of Systems

RESEARCH ASSISTANT

(Fixed term two-year contract) Ref.: ACA/184

Applications are invited for the post of Research Assistant to work under an SRC Grant on Hydraulic Control Systems. The successful applicant, who should hold an honours degree or equivalent in a relevant discipline and have some experience, will be required to work on the transient characteristics of hydraulic transmission lines. The applicant will be given the opportunity to study for a higher degree.

Salary : Burnham scale (Lecturer 1 point 0) £2,913 per annum including salary supplements.

Further details and application forms, which should be returned by 24 February, 1978, from the Establishment Officer, the Polytechnic, Queensgate, Huddersfield HD1 3DH (Telephone 0484 22288 Ext 2276).

TEESSIDE
THE POLYTECHNIC

Applications are invited for the following posts:

DEPARTMENT OF BUSINESS AND PROFESSIONAL STUDIES

LECTURER II SENIOR LECTURER IN BUSINESS STUDIES.

DEPARTMENT OF CIVIL AND STRUCTURAL ENGINEERING AND BUILDING

LECTURER II/SENIOR LECTURER IN CIVIL ENGINEERING mainly for the teaching of hydraulics, but some preference will be given to applicants able to offer some civil engineering construction.

DEPARTMENT OF MANAGEMENT

LECTURER II SENIOR LECTURER.

Responsibilities include:

(a) Training-organization and teaching in the Diploma in Personnel Management.

(b) Management development—particularly in the areas of communications, leadership and supervision.

Teaching/development requirements will be across a wide spectrum of courses and there will be a considerable demand for liaison with local organizations.

Candidates should possess a degree, preferably in social science and/or considerable experience in the field of training and management development.

Salary scale: Lecturer II/Senior Lecturer: £3,741 to £6,909 [illegible]. The appointments will be made within the lower part of the above scale.

Application forms and further particulars are available from the Staffing Section, Teesside Polytechnic, Borough Road, Middlesbrough, Cleveland TS1 3BA and are returnable within 14 days of the appearance of this advertisement.

WOLVERHAMPTON
THE POLYTECHNIC

DEPARTMENT OF BUSINESS STUDIES

LECTURER/SENIOR LECTURER IN PUBLIC ADMINISTRATION

(with special reference to Public Sector Management)

It is expected that the person appointed, who should be a graduate with a professional qualification and some practical experience, will be able to assist in the teaching of Public Administration, mainly central government administration, and particularly the teaching of Public Sector Management on the C.I.P.F.A. professional course.

Salary, Lecturer II, £3,744-£5,985 per annum ; Senior Lecturer, £5,523-£6,447 (bar) £6,909.

Application forms and further details from : The Establishment Officer, The Polytechnic, Wolverhampton WV1 1LY.

MANCHESTER
THE POLYTECHNIC

FACULTY OF COMMUNITY STUDIES

Applications are invited for the following posts within the Nursing Section of the Department of Applied Community Studies:

CS 224: HEALTH VISITOR TUTOR

CS 225: TUTOR IN MENTAL HANDICAP

In addition to possession of the relevant professional qualifications, applicants should have had some teaching experience.

The Nursing Section offers a wide range of courses and further expansion is planned. The tutors appointed will be expected to contribute to courses other than in their own speciality and the possession of any of the following additional qualifications would, therefore, be an advantage:

(i) a degree.
(ii) the Diploma of Nursing (London).
(iii) R.N.T.

Salary scale : Lecturer II, £3,279-£5,493 plus £402 per annum supplement (with possible subsequent transfer to the Senior Lecturer scale £5,031-£6,417 plus £482 per annum supplement).

For further particulars and application form (returnable by 20th February, 1978) please send a self-addressed envelope marked with the appropriate reference number to the Secretary, Manchester Polytechnic, All Saints Building, Manchester M15 6BH.

MANCHESTER
THE POLYTECHNIC

JOHN DALTON FACULTY OF TECHNOLOGY

DEPARTMENT OF MECHANICAL, PRODUCTION AND CHEMICAL ENGINEERING

LECTURER II IN CONTROL ENGINEERING OR PRODUCTION ENGINEERING OR MECHANICAL ENGINEERING

The successful applicant will be required to teach to Honours degree level, and will be given the opportunity to pursue research. Applicants should have industrial and/or research experience. Salary scale: £3,279-£5,493 plus up to £402 per annum supplement.

For further particulars and application form (returnable by 20th February, 1978) please send a self-addressed envelope marked "[illegible]" to the Secretary, Manchester Polytechnic, All Saints Building, Manchester M15 6BH.

MANCHESTER
THE POLYTECHNIC

DEPARTMENT OF HOTEL, CATERING AND INSTITUTIONAL MANAGEMENT

LECTURER I IN HOTEL AND CATERING ADMINISTRATION

Applications are invited from suitably qualified and experienced candidates. The duties are primarily concerned with teaching ACCOUNTANCY to students following H.C.I.M.A. Part B, H.N.D. and degree courses in the field of hotel, catering and institutional management.

The ability to offer marketing would be an advantage.

Salary scale: £2,913 to £3,577 plus up to £402 per annum supplement.

For further particulars and application form (returnable by February 21, 1978) please send a self-addressed envelope marked "HO/33" to the Secretary, Manchester Polytechnic, All Saints Building, Manchester M15 6BH.

THAMES POLYTECHNIC

SCHOOL OF MATHEMATICS, STATISTICS AND COMPUTING

STATISTICIAN

A vacancy exists for a LECTURER in the Division of Statistics and Operational Research to teach on degree and diploma courses throughout the Polytechnic. Candidates should have a good honours degree with industrial and/or teaching experience. A knowledge of operational research is desirable and an interest in teaching on business courses, as well as specialised statistics courses, would be an advantage. Research is encouraged and some consultancy could be considered.

Salary scale within the range: £3,693 to £7,151 gross inclusive plus 1977 Burnham award.

Further information and form of application may be obtained from the Staffing Officer, Thames Polytechnic, Wellington Street, London, SE18 6PF, to whom completed applications should be returned by 20th February, 1978.

Awards

THE WELLCOME TRUST

History of Medicine Fellowships

The Wellcome Trust provides grants for research in the history of medicine and maintains Wellcome Units for the History of Medicine in the Universities of Oxford and Cambridge, as well as the Wellcome Institute for the History of Medicine in London.

Applications are invited for research fellowships for up to three years, to be held in the Wellcome Units or the Wellcome Institute. Applicants must hold a doctorate or an equivalent qualification and have a background in history, science or medicine. Applicants should in the first instance, outlining their research proposals and enclosing their curriculum vitae, to the Director of the Unit in which they wish to work. The addresses are as follows, and letters should arrive not later than ... March:

The Wellcome Institute for the History of Medicine, ... Euston Road, London NW1 2BP.

Wellcome Unit for the History of Medicine, ... Road, Oxford OX2 6PE.

Unit for the History of Medicine, University College London, Gower Street, London WC1E 6BT.

Wellcome Unit for the History of Medicine, ... Lane, Cambridge CB2 3RH.

If the application is accepted by the academic concerned, it will then be forwarded to the Wellcome Trust for a decision on whether a fellowship can be awarded.

THE WELLCOME TRUST

Research Grants for Studies in the History of Medicine

The Wellcome Trustees invite applications from post doctoral scholars with historical training who are currently associated with a university in Britain and actively engaged in independent research. Fellowships of up to two years will be considered to enable applicants to undertake a specific programme related to some aspect of the history of medicine or medical science. By arrangement with the university authorities, applicants with university posts may have a period of research leave and the cost of their replacement be funded by the Wellcome Trust.

Applicants are asked to put forward their case in not more than two foolscap pages. A curriculum vitae... In the case of unestablished workers, the name of a suitably qualified person who has agreed to supervise the research, must also be provided.

The closing date for applications is 31st March ... should be sent to:-

The Grants Section (HOM),
The Wellcome Trust,
1, Park Square West,
London NW1 4LJ.

Colleges and Institutes of Technology

ABERDEEN
ROBERT GORDON'S INSTITUTE OF TECHNOLOGY

SCHOOL of MECHANICAL & OFFSHORE ENGINEERING

LECTURERS

with honours degree and appropriate ... or research experience, to develop aspects of offshore engineering or industrial plant, e.g. design, stress analysis.
Salary scale in range £3,688-£6,999 ... (under review).
Assistance with removal expenses.
Details from Chief Administrative Officer, Robert Gordon's Institute of Technology, ... Aberdeen AB9 1FR (0224-574511).

Colleges and Institutes of Technology continued

HAMPSHIRE

[illegible]

Salary Scale ... £3,741 to £5,985 ... (bar) ... £6,147 ...

Application forms and further details from the Principal, Southampton College of Technology, East Park Terrace, Southampton, SO9 4WW. ... Closing date ...

Colleges of Education

CAMBRIDGE

[illegible]

Applications are invited for the post of ... which is an Approved Society within the University of Cambridge.

The person appointed will be required to take a full part in work of the department ... teaching ... Studies ... the University ...

Salary : Lecturer II ... Senior Lecturer Scale : £5,523 to £6,909.

Application forms may be obtained from the Principal's Secretary, Homerton College, Cambridge, to whom applications should be sent by February 24.

Colleges and Institutes of Higher Education

PLYMOUTH

COLLEGE OF SAINT MARK & SAINT JOHN
Derriford Road, Plymouth PL6 8BH
Tel. Plymouth 777188

LECTURER APPOINTMENTS IN ENGLISH

Applications are invited from ... with experience in research and higher education teaching for two posts in ... from 1st September.

Candidates should be qualified to teach either 19th Century or 20th Century studies in English up to Honours degree level. An interest in ... Literature would be an advantage, as would an interest in the relationship between Literature and Society.

Although both posts are ... related to the B.A. ... Humanities degree, there are some opportunities for teaching on the B.Ed.

The appointments are expected to be made in Lecturer II/Senior Lecturer range according to experience and qualifications. For the right candidate it may be possible to appoint at Principal Lecturer.

Salary scales : Lecturer II/Senior Lecturer, £3,279-£6,417 plus the two supplements. Principal Lecturer, £5,940-£7,578 plus the two supplements.

Further particulars may be obtained from the Principal's Secretary, on receipt of a stamped addressed envelope. Completed letters of application should be returned not later than 22nd February, 1978.

Classified Advertisements

To advertise in The THES phone Lorraine Williams 01-837 1234 Extn 575

THE TIMES Higher Education SUPPLEMENT
New Printing House Square, P.O. Box 7
Gray's Inn Road,
London WC1X 8EZ

Colleges and Departments of Art

LEICESTERSHIRE

[illegible]

Administration

THE OPEN UNIVERSITY
ACADEMIC ADMINISTRATION DIVISION

ADMINISTRATIVE ASSISTANT (REGISTRY)

Applications are invited for the post of ADMINISTRATIVE ASSISTANT in the Registry Section of the Academic Administration Division of the Secretary's Office. The Registry provides a range of services to undergraduate, associate and higher degree students including admission, registration, fee collection, certification, graduation and the preparation of student official publications. The main purpose of the post will be to assist the Registry administrative team by undertaking ... administrative tasks or projects and substituting for Registry administrators on long term absence or secondment or leave.

Initial salary is likely to be in the lower part of the 1A salary grade £2,961 to £5,627 per annum (under review).

Application forms and further particulars are available, by postcard request please, from the Personnel Manager (AR 3), The Open University, P.O. Box 76, Walton Hall, Milton Keynes, MK7 6AL, or by telephone from Milton Keynes 653868 (there is a 24-hour answering service). Closing date for applications, February 28th, 1978.

LOUGHBOROUGH STUDENTS' UNION

WELFARE AND RESEARCH OFFICER

A Welfare and Research Officer is required to handle student welfare case work and to research briefing documents on a wide range of students' interests.

Salary is within scale £2,904 to £3,711 (under review).

Write for further details to Permanent Secretary, Loughborough Students Union, Edward Herbert Building, University of Technology, Loughborough, Leicestershire.

Appointments Wanted

INORGANIC CHEMIST
age 40, M.Sc., Ph.D.

Requests opportunity to apply for responsible situation in teaching and/or administration and/or research in tertiary level institution. Experience includes various research awards and university teaching positions to Senior Lecturer in England and Australia. Publication list. Position in developing country considered. Contact ... 155 Mitre Street, Bathurst, N.S.W. 2795, Australia.

MALE, 30

Completing Doctoral Dissertation in English Literature, two years' Canadian university teaching, three years' high school teaching in England and Greece. Head of English British private school; married, wife B.A. English Masters in Library Science, looking for teaching, admin. post. References on request.—Write Box 1695 V, The Times WC1X 8EZ.

Courses

MANCHESTER
THE UNIVERSITY

GRADUATE STUDIES IN GOVERNMENT

The Department of Government at Manchester offers two different kinds of graduate programme: (1) Research programme leading to the degree of M.A.(Econ.) or Ph.D. by thesis. (2) One-year programme of coursework and short dissertation leading to the degree of M.A.(Econ.). The programme offers the opportunity of specialising in one of the following areas: Comparative politics; Public policy and administration; Political theory and political development. Both types of programme are supported by S.S.R.C. quota awards.

A detailed brochure and application form can be obtained from: The Secretary to the Graduate School, Department of Government, The University, Manchester M13 9PL.

ADVANCED STUDIES AND RESEARCH IN ART AND DESIGN EDUCATION

[illegible]

Master of Education in Art and Design

Advanced Diploma in Art and Design

Taught courses include curriculum evaluation, development and innovation, art and design in contemporary society, psychological perspectives in teaching and learning in the arts. Opportunity exists to emphasise areas of special professional and personal concern.

The Centre for Art Teacher Education of Brighton Polytechnic and the Education Area of the University of Sussex are jointly responsible for teaching and research supervision, and both full and part-time programmes are available.

The Advanced Diploma in Art Education has been running for three years, and approval is currently awaited from Senate of the University of Sussex for the Masters course to commence in September 1978.

Applications should be made now for forms and further information to: The Registrar, Brighton Polytechnic, Moulsecoomb, Brighton BN2 4JG. Telephone Brighton (0273) 693 655.

Brighton Polytechnic

'A' LEVEL BIOLOGY FIELD COURSE— EASTER 1978

23rd to 29th March.

Led by highly qualified staff, the course will cover theory and practical field work on shores, marsh, rivers and woodland.

Details : ... CENTRE, Kingsbridge, S. Devon. Telephone : ... 227.

Announcement

MOTOR CARAVAN HIRE

Special discount for teachers, AA cover and continental travel at competitive rates, off peak weekend hire ... Phone Driveaway Hire, 01-... .

General Vacancies

LOOK AFTER YOURSELF!
The Health Education Council

Free Training for Tutors for Experimental Adult Health Education Courses.

The Health Education Council are planning a free course of training for tutors for experimental adult education courses on personal health, exercise and relaxation.

Training for 20 prospective tutors will involve two three day blocks, one in March the other in June, 1978. Those who successfully complete the training will be expected to run experimental Adult Health Education classes—"Look After Yourself" in the academic year 1978-79.

Applicants should have a relevant background in education and/or health, and be resident in London or the Home Counties; they will also need their employers permission to attend the course.

Application forms and further information are available from Personnel Manager, The Health Education Council, 78 New Oxford Street, London WC1A 1AH. Tel. : 01-637 1881. Closing date 24th February, 1978.

The Health Education Council

METROPOLITAN BOROUGH OF STOCKPORT
SOCIAL SERVICES DIVISION

PROJECT LEADER

SO.1/2 £4,759 - £5,512 p.a. inc.

A project will be set up shortly to investigate the contribution of volunteers and their effective use in meeting social need. The emphasis of the research will be on developing techniques for the evaluation of voluntary activity, for example by means of cost benefit analysis. The 3½ year project will be funded by the Joseph Rowntree Memorial Trust, and managed by the Metropolitan Borough of Stockport. A project staff of four will be appointed.

Applicants should have academic qualifications for social research, operational research or systems analysis, and have experience of the application of systematic techniques in the social field. Experience of voluntary work or of computer programming would be an advantage.

Informal inquiries to Mr. L. J. C. Hayles, Assistant Director. Tel. 061-480 0101, ext. 362, or Miss D. Fowles, ext. 395.

Application forms and further details from the Personnel Unit, Town Hall, Stockport SK1 3XE, tel. 061-480 4949, ext. 135. Closing date February 28, 1978.

WELLCOME INSTITUTE FOR THE HISTORY OF MEDICINE

Curator of Oriental Books and Manuscripts

[illegible]

... by the **Secretary, Wellcome Institute for the History of Medicine, 183 Euston Road, London NW1 2BP, not later than 10th March, 1978.**

DORSET

CANFORD SCHOOL, Wimborne

A TEACHER of MODERN LANGUAGES is required for September 1978 to teach French throughout the School. The ability to teach Spanish to 'O' level would be an advantage but not essential. Applicants should be willing and able to play a full part in the extra-curricular activities of the School. A Graduate ... own salary scale. Married or bachelor accommodation is available.

Applications with full curriculum vitae and the names of two referees, should be sent as soon as possible to: The Headmaster, Canford School, Wimborne, Dorset.

EVERY WEEK

The THES is read by over 75,000 academics, teachers, ... administrators ... throughout the UK.

If you have an announcement to make to the academic community, there is no more effective ... For more information contact John Lathom, Advertisement Manager, on 01-837 1234.

The Times Higher Education Supplement

Overseas

HONGKONG POLYTECHNIC

Head of Department Civil & Structural Engineering

c.£13,725

- 25% gratuity on salary
- Free passages
- Free medical treatment
- Education allowances
- Low tax area
- Generous leave
- Subsidized accommodation
- School passages

This important post is tenable immediately and carries a salary within a range but not less than HK$10,350 per month
(Note : HK$9.05=£1 on January 27, 1978)

The Department is a constituent member of the Division of Engineering and offers courses on a unitary basis from technician to professional level. It has an academic establishment of 30 and support staff of 22.

The successful candidate will be required to lead the Department's activities, to participate fully in the work of the Division of Engineering and to promote effective communication with industry and the community.

Applicants should have
(a) a degree (preferably a higher degree) in Civil Engineering and corporate membership of an appropriate institution :
(b) at least five years' relevant experience in consulting, contracting, or in the work of a public authority ;
(c) five years' experience in a tertiary education institution, preferably at Principal Lecturer or equivalent level. Experience should include course development, practical training of students in the profession, development of laboratory work and of industry-orientated research. An interest in the development of self-learning activities an advantage.
(d) substantial organizational and administrative experience.

● The appointment will be for four years initially on gratuity bearing terms but suitable candidates may, at the discretion of the Polytechnic, be considered for conversion to superannuable terms after two years of service if they so wish.

Further details from the Recruitment Unit, TETOC (Technical Education and Training Organisation for Overseas Countries), 35/37 Grosvenor Gardens, London SW1W 0BS, quote ref: HKP/CSE/THES.
Closing date for completed applications : March 4.

Tetoc

The Harvard School of Public Health is seeking two tenured Professors as follows :

Professor in Health Policy and Management

To have a major role in directing the school's activities in the Policy and Management areas and in related teaching and research. Interest required in public policy issues in health area, particularly health services and environmental and occupational causes of ill health. Familiarity with management and regulatory questions in public and non-profit sectors desirable.
Advanced degree with minimum of five years' professional experience at post-terminal degree level required, as is demonstrated excellence in teaching and research.

Professor of Health Economics

To have a major role in the school's teaching and research activities in the health policy and management area. Facility with formal and non-formal analytic methods required, as is interest in applied and policy oriented research in health areas.
PhD in economics with minimum of five years' professional experience at the post-doctoral level is required, as is demonstrated excellence in teaching and research.
For full job descriptions, or for submission of curriculum vitae, please write to Search Committee Chairman, Dr C. Peter Timmer, 665 Huntington Avenue, Boston, Massachusetts 02115.
Harvard is an equal employment employer with an Affirmative Action programme.

Overseas continued

OVERSEAS TEACHING POSTS

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TEACHER OF SILVICULTURE (IRAN)

Higher School of Natural Resources, Gorgan. To teach up to B Sc level, give practical instruction, set and mark examinations, assist with curriculum development. Qualifications: Degree plus postgraduate diploma, or preferably M Sc. in forestry and/or related subjects and at least 2 years' relevant teaching experience. Men only, single or married candidates, maximum 2 children under 5. Salary: £5,048-£6,160 pa tax-free.

Benefits: personal and children's allowances, free furnished accommodation. 2 year contracts.
77 HO 40-42

HEAD OF RESOURCES DEPARTMENT (GHANA)

Kumasi Teacher Training College. To develop and teach a course in Educational Technology, to encourage staff to develop teaching materials and to organise the Resource Centre as a development centre for technical institutions. Degree and at least 5 years' experience in an Educational Technology Unit in tertiary education essential. Diploma in Educational Technology an advantage.
Salary: £4,589-£5,618 pa.

Benefits: free furnished accommodation; overseas and children's allowances; 2 year contract, possibly renewable.
77 CT 5

Return fares are paid. Local contracts are guaranteed by the British Council. Please write briefly stating qualifications and length of appropriate experience and quoting relevant reference number and title of post for further details and application form to The British Council (Appointments), 65 Davies Street, London W1Y 2AA.

THE BRITISH COUNCIL

COLLEGE OF EDUCATION
P.O. Box 157
Abha, Saudi Arabia

For Fall 1978: 3-4 INSTRUCTORS/ASSISTANT PROFESSORS of ENGLISH LANGUAGE and LITERATURE. PhD and experience in TEFL preferred. Language lab experience helpful. Maximum teaching load-12 hours. Competitive salaries. Furnished housing and round-trip transportation for appointee and family. One year contract, renewable.

For application form write the Dean of the College of Education.

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The New South Wales Institute of Technology is a corporate body established to provide a wide range of professional courses for those entering or already employed in industry, government or technological fields. Applications are now invited for the following academic positions in various faculties.

FACULTY OF BUSINESS STUDIES
SENIOR LECTURER IN ACCOUNTING

The Faculty of Business Studies currently offers a Bachelor of Business degree with concentrations in Accounting, Marketing, Operations Management and Public Administration. In addition, the Graduate Diploma in Accounting and the Graduate Diploma in Personnel Management/Industrial Relations were introduced in 1977 and it is anticipated that expansion of Graduate courses will proceed in the near future. Total current enrolment in the Faculty approximates 2,600 students.
Applicants for this position must possess a higher degree with a major interest in Accounting and should preferably have an interest in the Financial Accounting/Audit or Management Accounting/Systems areas. In addition, sound professional accounting experience in public accounting, commerce or government is sought. Teaching experience at tertiary level is desirable. The position carries responsibility for providing academic leadership in the School in appropriate disciplinary areas and in undertaking specific administrative duties within the School and the Faculty.

FACULTY OF ENGINEERING
SENIOR LECTURER IN DIGITAL ELECTRONICS

The Faculty of Engineering comprises the Schools of Civil Engineering, Electrical Engineering and Mechanical Engineering. Each School offers undergraduate programmes leading to the award of Bachelors degrees and Graduate programmes leading to the award of Masters degrees and Graduate Diplomas. The Faculty is the only Faculty of Engineering in the State which requires students to have significant industrial experience before graduation.
This position is within the School of Electrical Engineering. The School is at an early stage in its development having produced its first graduates some four years ago and only recently enrolled its first post-graduate students. It already accounts for a considerable portion of the State's annual output of Electrical Engineering graduates.
The Senior Lecturer will be directly responsible to the Head of School for further development of the teaching programme in Digital Electronics at both undergraduate and post-graduate levels. The School attaches much importance to the quality of its teaching and applicants will be expected to have an interest in innovative teaching with preferably some teaching experience. The position also involves establishing and maintaining close contacts with industry and fostering the development of post-graduate research work. Applicants should have a higher degree in Electrical Engineering and have had substantial industrial experience in digital hardware design, particularly in the fields of microprocessor-based systems and digital communications.

FACULTY OF MATHEMATICAL AND COMPUTING SCIENCES
SENIOR LECTURER IN COMPUTING METHODS

The School of Computing Sciences is seeking applications from those with high academic qualifications and experience in computing methods to conduct courses which combine mathematics and computing. Considerable experience in computing and systems software is desirable plus a strong mathematical background.
Electives are available for students to combine mathematics and computing in their degree course and the successful applicant would be required to further develop those electives. A person with interests in Numerical Analysis, Modelling of Automata, Control Theory or appropriate areas of Operations Research may possess the type of background sought.
Salary would be in the range of $A19,971-$A23,289.
With consent of Council academic staff are permitted to undertake limited consulting work.
Fares and a contribution towards removal and initial accommodation expenses are provided for interstate appointees. A housing Loan Scheme is also available.
Applications close on February 24, 1978. Applicants should arrange for three confidential referees' reports to arrive by the same date. Written applications should include, address, phone number, personal particulars, evidence of qualifications, work and teaching experience, affiliations, publications, research work undertaken and the names and addresses of the referees contacted. Applications and referees' reports are to be sent to:
THE AGENT-GENERAL FOR N.S.W.,
N.S.W. Government Offices,
66 The Strand,
LONDON, WC2N 5LZ, ENGLAND.

Western Australian Institute of Technology

The Institute is a major tertiary institution providing degree and diploma studies at both undergraduate levels for over 11,000 students. Programs may be taken on a full-time, part-time or external-study mode.

SCHOOL OF BUSINESS AND ADMINISTRATION MANAGEMENT: HEAD OF DEPARTMENT (Ref. No. 061)

The Department of Management has an academic staff of 20. Majors in Marketing, Personnel and Industrial Relations, Public Administration, Educational Administration and Finance are taught within a School degree programme, to which the other School Departments of Accounting, Business Law and Economics, Computing and Quantitative Studies also contribute.

The Head must have expertise in at least one of the major teaching areas of the Department and will be responsible to the Dean for academic leadership and the supervision of Departmental activities.

Salary: £15,241 (sterling)—quoted at January 20, 1978, rate of exchange.
Qualifications: Academic qualifications and industrial/commercial/professional/teaching experience are essential. Research and publications experience desirable.
Tenure: Appointment may be either Tenured or Non-Tenured for a period up to three years.
Conditions include: (Tenured) Annual, Long Service and Study Leave. A choice of Superannuation is available if required, including a scheme similar to FSSU. Fares for family plus assistance for removal expenses and temporary accommodation are payable to appointee. (Non-Tenured) Four weeks' annual leave. Fares for family, plus some assistance for removal expenses are payable to appointee.
Applications: Detailed applications, including a curriculum vitae and the names and addresses of three referees should be submitted not later than March 11, 1978, to the Migration Liaison Officer, Western Australia House, 115 Strand, London WC2R 0AJ, England. A brochure containing further information may be obtained from the above address. When applying please quote position and reference number plus media code HE6.

Personal

CALIFORNIAN ACADEMIC

wishes to exchange four-bedroomed house, Marin County, 20 minutes San Francisco, 40 minutes UC Berkeley, and car for similar in or near London for six weeks June-July.

Write Box 1671 V, THES, The Times, WC1X 8EZ.

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Write urgently Ian Grenal, M.I..., Single Bank of New Zealand, Haymarket, London, S.W.1.

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CHURCHLANDS COLLEGE
Perth
Western Australia

Churchlands College was established [illegible] and is situated six miles from the c[illegible] Perth. In 1978, 1,250 students are en[illegible] Teacher Education courses, and 800 s[illegible] in Business Studies courses. There a[illegible] members of academic staff.

INTERVIEWS:

Two senior members of staff will [illegible] United Kingdom in April, 1978, and [illegible] dates who have been shortlisted [illegible] offered the opportunity to atte[illegible] interview.

LEVEL OF APPOINTMENT:

Appointments may be made at the [illegible] Lecturer level, Lecturer level, As[illegible] Lecturer level, or Tutor level, dep[illegible] upon qualifications and experience.

QUALIFICATIONS:

A suitable tertiary qualification, pre[illegible] at graduate level, together with e[illegible] of high capacity and, where app[illegible] membership of professional Insti[illegible] Relevant experience is essential.

Applications are invited from s[illegible] qualified persons with relevant exp[illegible] for the following positions. Appoi[illegible] will be made to commence teach[illegible] February, 1979.

EARLY CHILDHOOD EDUCATION

1. To teach psychological and/or soci[illegible] foundations of Early Childhood Ed[illegible]
2. To teach theoretical and practical [illegible] ground in one or more of the curricul[illegible] teaching areas, such as, music ed[illegible] art education, oral English and [illegible] mathematics education, and social s[illegible] education.

EDUCATION

1. To teach courses related to elem[illegible] school practice.
2. To teach courses related to the sociol[illegible] and/or philosophical foundations of ed[illegible]tion.

MATHEMATICS EDUCATION

1. To teach courses related to the teach[illegible] mathematics in elementary schools.

PHYSICAL EDUCATION

1. To teach courses related to the teach[illegible] physical and/or health education in ele[illegible]tery schools.
2. To teach background courses in the ge[illegible] areas of physical and health education.

GENERAL INFORMATION

SALARIES:

Senior Lecturer	Aust.$19,678-$22[illegible]
Lecturer	Aust.$14,632-$19[illegible]
Assistent Lecturer	Aust.$12,593-$14[illegible]
Tutor	Aust.$10,362-$12[illegible]

CONDITIONS OF SERVICE:
Similar to those in Australian Universities.

APPLICATIONS

close on 24th March, 1977. Interested pe[illegible] should write, requesting the usual for[illegible] application, to:

Migration Liaison Officer,
Western Australia House,
115 Strand, London WC2R 0AJ.

LETTERS TO THE EDITOR

The right balance of teaching and research

Sir,—What a pity that Lord James [illegible] Rusholme, among the [illegible] this he made to the North London [illegible] conference (THES, January [illegible]), should still have reproduced [illegible] tired old argument that the universities' emphasis on research endangers the quality of their teaching.

It is not just that the young teacher (why is it always a young [illegible]?) who neglects his teaching in favour of his research is largely a figment of the imagination of some educational pundits. In 30 years of teaching, in four universities in this country and in three in the United States, I have met only one young man who fitted [illegible] description.

Much more important is that Lord James [illegible] relationship between [illegible] teaching and research. A good university teacher does not teach what he is researching on, or only very rarely. But he must know what it is to do research, and not only the supervised research of the PhD student.

I doubt very much whether any one can be a really good teacher of undergraduates as well as of postgraduates who does not submit himself to the discipline of handling refractory research material and arguing a difficult thesis on the basis of the most sophisticated techniques of his discipline.

How else will he be able to convey to his students the true nature of his subject or the advances made [illegible] in the field.

The [illegible] I wonder how Lord James and, for that matter, the condescending Dr [illegible], can be so confident about their ability to judge [illegible] for the purposes of teaching, less important than the fact that the research is being undertaken. Teaching is a difficult art, and there are no doubt many ways in which most of us could improve our performance. But giving up research is not one of them.

Yours faithfully,
H. G. KOENIGSBERGER,
Professor in the department of history,
King's College, London.

CAFD and Marxism

Sir,—Anthony Arblaster's claim (THES, January 27) that by attacking the Gould Report he and the Council for Academic Freedom and Democracy are defending academic freedom is extraordinary in the [illegible] of his, and the CAFD's, record of publications and actions over the [illegible] seven years. Consider for example his robust defence of Marxist bias at the Open University [illegible] elsewhere (THES May 11, 1977). Three points emerge from a careful consideration of his expressed views. First, he nowhere considers [illegible] major academic criticisms levelled at some Open University courses [illegible] lack of comparable critical discussion of both liberal and Marxist [illegible]tions, and the absence of genuine comparative analyses of existing Marxist and liberal societies.

Second, he restates part of the charter for bias in academic work which he set out at length in his book Academic Freedom, a 1974 Penguin Education Special. The main principles of this charter [illegible] that personal bias and ideological commitments in academic work should be fostered rather than minimized, that students have as much right to a determining role in academic matters as staff, and that disruption in academies, including disruption of legitimate meetings and lectures, should not be opposed and should even in some cases be given principled support. These principles may seem [illegible] but in practice they combine to provide an environment of anti-academic licence rather than academic freedom and so enable [illegible] to flourish.

Finally, and perhaps most important, the discussions of academic freedom offered by Anthony Arblaster and the CAFD concentrate almost exclusively on alleged threats to such freedom in Britain or other liberal societies and virtually ignore the principled and explicit contempt for academic freedom which is shown by both the structures and the practices of all existing Marxist societies.

Comparative analyses of existing liberal and Marxist societies should be an essential part of any serious discussion of Marxism whether in Open University courses or elsewhere in higher education.

And students have a right to expect that advocates of Marxist-inspired revolutionary social change like Mr Arblaster and other neo-Marxist members of the New Left should pay especial attention to the harsh realities of Marxism in practice; their failure to do so perhaps reflects the difficulty of sustaining the utopian aspirations of Marxism in the face of such harsh realities.

There are deep epistemological, political, social and moral issues between liberalism and Marxism—as neo-Marxists like Mr Arblaster know well. It is rare that such issues were openly discussed. Those who value the survival of liberal freedoms cannot afford (to quote Professor Gould in the Gould Report) to allow Marxists "to wage a one-sided intellectual civil war" by adopting a position of "unilateral cultural disarmament".

Yours faithfully,
JOHN MARKS,
Department of Physics,
Polytechnic of North London.

An upgraded PGCE

Sir,—Discontent about the Postgraduate Certificate of Education rumbles on and there seems to be a widespread feeling that the course is not adequate as the main intended mechanism to train our future teaching profession.

As a means of upgrading the course perhaps it should be structured on the same basis as other higher degrees, ie, over a full year. This would hopefully attract applicants who would otherwise consider a higher degree. Teaching practice could then take place during normal school terms with theory in between. This would extend the scope of teaching practice and make it more like the real thing and less of a circus act as it too often is now. The whole of the college staff would then be available to teach theory to both BEd and PGCE students without timetable conflicts.

If PGCE theory was taught between school terms practising teachers on in-service training could be brought in to lead post-experience seminars. If tutors were present at the same time, tutors, students and teachers might come to a better understanding than is often the case at the moment.

To support an upgraded PGCE on this basis many colleges would need an extraordinary equipment grant from the DES and extra costs would be incurred to give postgraduate grants for a full year to PGCE students but this seems a small price to pay for higher calibre, much more experienced young teachers.

Yours sincerely,
NEIL S. HARDIE,
Kingsgate Road, Kilburn, London.

The higher madness

Sir,—Here I [illegible] with Professor [illegible] feelings about full time equivalents (THES, January 20). Unfortunately his article only scrapes the surface of the "higher madness". FTEs are also used in the calculation of SSRs, or student staff ratios, and here the madness runs deep as well as high. The method (apparently emanating from the DES) for calculating the SSR of an institution as a whole gives a reasonably reliable picture, though as always, part time students are dealt with [illegible]. But the method of calculating SSRs for subjects within the institution gives rise to all sorts of anomalies. Some of us at the Middlesex Polytechnic have been trying to make the relevant internal authorities aware of this—but with little effect.

The SSR of a subject is taken by our management (and presumably the DES as well) as a crude measure of that subject's efficiency in the production of graduates. But this is not how the calculation works. The method of calculating the SSR of a subject incorporates a number of assumptions which have surprising implications.

Consider the following simple example. Suppose that a single-subject course within a given faculty is under pressure to improve the efficiency with which it uses its overworked staff. It does this by altering its teaching methods so that students now receive only half the previous average number of curriculum hours. Other courses within that faculty retain their previous teaching methods. Other things being equal, one would suppose that the course's efficiency had doubled. But this is not how it shows up in the SSR.

In order to calculate the SSR, you divide the number of FTE students by the number of FTE staff. The number of FTE students is a function of average curriculum hours. In our hypothetical course, this has been halved, so the course is only credited with half of its original number of FTEs whilst the number of FTE staff remains the same. The net result is that a real *doubling* in the efficiency of that course shows up in SSR terms as a *halving* of its efficiency.

The moral is that if your SSR is below 10:1 you should teach your students more—preferably in large lectures. And if you can persuade your management that your students ought to have a week's field trip, you will find this will work wonders for your SSR. So the best way of meeting DES targets of efficiency (measured in SSRs as currently calculated) is to work inefficiently.

Yours sincerely,
GRENVILLE WALL,
Senior lecturer in philosophy,
Middlesex Polytechnic.

European administration

Sir,—The statement in the article by Terence Bishop (THES, January 6) that the United Kingdom is significantly under-represented in the middle ranks of administrators in the European Communities should not be allowed to pass without some explanation.

The charge is frequently made that the "insular" British have failed to make the most of the opportunities available to them for work in the European Communities at the intermediate administrative and executive level.

What is not generally known, and comes as something of a surprise even to careers advisers in universities, is that posts in category B in the communities, i.e. those at the intermediate administrative and executive level, are not open to university graduates. By contrast, middle range administrative posts in the British Civil Service are open to graduates, who are now also being recruited into the lower level grade of clerical officer.

If the European Communities were to withdraw the prohibition against graduate recruitment to category B staff it is likely that a substantial number of British graduates, particularly from European studies degree courses of the type currently offered at the University of Bath, would put forward their candidature.

The British Civil Service Commission has modified its educational requirements in recent years for entry to the various levels of middle management to take account of the increased numbers of graduates seeking administrative posts. Surely some way can be found to induce the European Communities Commission to modify its regulations and allow graduates to apply for posts in category B.

Yours sincerely,
J. COVENEY,
Professor of French,
University of Bath.
